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ABSTRACT

The Borough of Etobicoke (Ontario) has been seriously affected by declining enrollment. A long-term plan forecasts the necessity of closing many schools by 1987. This report presents findings of a 1978-79 study concerning the feasibility of converting unneeded school buildings to senior citizen housing. It includes drawings and descriptions of senior citizen apartments that could be created in three Etobicoke schools: mechanical, electrical, and structural requirements; and cost analyses. The study concluded that (1) schools generally can be economically converted to residential housing to fit the lifestyle of senior citizens: (2) the residential environment so created will be better in quality than most existing senior citizens facilities: (3) where maximum government subsidies are obtainable, schools can generally be converted to senior citizens residential facilities at costs comparable to or lower than those for similar facilities in new buildings: and (4) a survey of senior citizens demonstrated that a converted school accommodation could provide residential facilities highly acceptable to the prospective occupants. (Author/JM)

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Project School House

A Project of
The Board of Education for
The Borough of Etobicoke
financed by
The Metropolitan Toronto
School Board

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Project School House

What It Is
How It Began

Student enrolments at elementary and secondary schools are falling dramatically in nearly all parts of Canada. Classrooms and buildings that were built to accommodate the exploding populations of the 1950's and 1960's are becoming vacant or are only partially utilized.

The Borough of Etobicoke is one of the districts most seriously affected by this nation-wide trend. As part of Metropolitan Toronto, this municipality experienced rapid growth during the two decades from 1950 to 1970. Its school system is now experiencing a correspondingly rapid decline. In 1949, on formation of the first Etobicoke Board of Education, there were 5,425 students enrolled in Etobicoke schools. By 1970, the Borough had more than 61,000 students attending its public elementary and secondary school system. Since that watershed year, the enrolment loss has averaged approximately 1,800 students per year. In January, 1979, enrolment was down to 46,335.

During the eight years from 1970 to 1978, Etobicoke Board of Education closed five elementary schools because of enrolment decline. A long-term plan forecasts the necessity of closing many more schools by 1987.

What is to be done with vacant schools? Etobicoke Board of Education has already had to face this problem. Many other boards and communities will likewise be confronted with it in the next 10 years. Etobicoke has been successful thus far (up to December, 1978) in finding appropriate tenants and uses acceptable to the community for its vacant schools. The fact that appropriate tenants and acceptable uses are becoming much more difficult to find, however, has prompted Etobicoke Board of Education to request research by its staff into alternate innovative uses to which other vacant schools might be put.

In beginning such a survey staff members were asked to bear in mind that: ideally, such uses should be compatible with communities in which schools are located; should fill a community need; should, as far as possible, render some service or use to taxpayers whose dollars went to build the schools; and should be financially self-supporting wherever possible.

One of the possible uses first considered was conversion of vacant schools to senior citizen housing or nursing-home accommodation. Such use would meet the criteria established. It would demonstrate a very practical recognition of the fact that as juvenile populations decrease, adult populations, particularly populations of those over 65, are expanding and will continue to expand. The need for affordable and comfortable but compact living accommodation will also expand for elderly people, many of whom have chosen to divest themselves on retirement of the expense and labour of maintaining homes originally acquired as family accommodation.

Questions arose as to the financial, social and physical feasibility of converting schools to senior citizen accommodation. What would be the actual costs of such conversion? What rentals would have to be charged to cover such costs? How would such rentals compare with those charged for private rental accommodation and for apartments in senior citizen housing projects built especially for that purpose? Are there serious or insuperable structural or design difficulties in converting schools to housing accommodation? Perhaps most important, would the housing so created be acceptable and attractive to senior citizens? Would it inevitably be enveloped in an institutional aura that would repel the people for whom it was intended?

No immediate or easy answers were available to these

and many other questions. The entire question of school conversion to multiple housing represents a new field as far as Ontario is concerned. It became evident that only a detailed study by teams of specialized professionals could produce the concrete facts and actual figures necessary.

Cost of a detailed study was estimated at approximately $65,000. Such a sum for such a purpose was felt to be beyond the means of Etobicoke Board of Education, particularly since the benefits of the study would likely be utilized by many other boards in Ontario and across Canada. It was decided that the necessary funding should be sought beyond Etobicoke. First approach was to Canadian charitable foundations for assistance. This was unsuccessful. Second approach was to the Metropolitan Toronto School Board. This was successful. After considering the likely benefits of the study and Etobicoke's past experience in finding uses for vacant classrooms and schools, the M.T.S.B. voted to include an amount in its 1978 budget to fund the study. H. W. Moore, Controller of Planning and Plant for Etobicoke Board of Education and Dr. F. G. Ridge, Director of Capital Programming and Research for the Metro Toronto Board, were named co-directors of the project. Some specialist members of the M.T.S.B. staff were also seconded to assist with the work.

The study began in the winter of 1978 with appointment of a Study Steering Committee. The committee prepared organizational plans and subsequently appointed seven professional consultants to carry out detailed work in each of seven fields. The consultants' names, with their qualifications and areas of specialty, are listed later in the report.

This report, in essence, represents the detailed findings of those consultants. We suggest that it does show that such conversion is highly feasible. We hope it will prove to be of value to many school boards in many communities, and that it will ultimately benefit a great many senior citizens.

Etobicoke Board of Education

Keith G. Kiddell	Paul W. Buddenhagen
Chairman of the Board	Director of Education

The Results

Major Conclusions Drawn From This Study

1. Schools generally can be economically and functionally converted to residential housing to meet the lifestyle of senior citizens.

2. The residential environment so created will generally be better in quality than most existing senior citizens facilities.

3. Where maximum government subsidies are obtainable, schools can generally be converted to senior citizens residential facilities at costs comparable or lower than those for similar facilities in new construction.

4. A survey of senior citizens demonstrated that converted school accommodation could provide residential facilities highly acceptable to the occupants.

About The Schools In This Report

To make a realistic study of school conversion that would produce actual cost figures and actual answers to structural and social questions, actual school buildings had to be studied.

Three representative schools were chosen as specimens for study: Martin Grove Gardens Junior School, Rexdale Junior School and Royal York Collegiate. These three were selected because they are typical and representative of the major factors involved in the study such as location, design, size, age and social milieu, not because of any likelihood that they will be closed.

There should be no intent read into this report that the three schools here examined are necessarily going to be closed. Such a decision would be the prerogative of the Etobicoke Board of Education after consideration of all the factors involved.

This report does not presume to make recommendations on such a decision. It merely examines the three schools as models to produce formulae which could be applied to all schools.

Recommendations To The Ontario Ministry of Education

Nearly all Ontario schools have been built with the assistance of capital grants from the Ontario Ministry of Education. When such school buildings are sold or otherwise disposed of by a school board, the Ministry has the right to recover the contribution it made to the cost of building the school. This recovery takes the form of a negative grant, in that it may be deducted from other grant funds currently being paid to the board.

If vacant schools are to be converted to senior citizen housing or to other uses, it is desirable that some consistent formula be adopted by the Ministry so that boards will know exactly where they stand in regard to repayment of negative grants.

The writers of this report suggest that the following proposed policy could apply as a consistent negative formula for a wide variety of situations.

It is therefore recommended to the Ontario Ministry of Education:

1. Where a board experiencing declining enrolments determines that a school must be permanently closed and has been unable to dispose of the property through the sale, conveyance or lease to (a) another school board (b) a publicly supported post-secondary institution (c) the municipality in which the building is located or a local board thereof as defined in the Municipal Affairs Act (d) Conservation Authorities (e) Provincial and Federal Governments or authorities established by them, at a reasonable price based upon fair market value, the following policy be applied prior to the disposal of the school by the process of public tender.

   (a) That, where a board identifies an alternative use for the facility involving a long-term lease to a non-profit organization approved by the Minister, the Ministry waive the negative grant on the undepreciated value of the building (i) if the revenue from the lease is used to retire any existing debt on the facility, (ii) the balance of the revenues over the period of the lease is placed in a reserve fund for future capital expenditure. The Ministry would cease to pay its share of the debt outstanding after the date of the lease.

   (b) That, where a board sells a facility to a non-profit organization approved by the Minister under the same conditions outlined above, and (i) the proceeds of the sale are used to retire any existing debt and (ii) the balance is placed in a reserve fund for future capital expenditures, the Ministry waive the negative grant on the undepreciated value of the building. The Ministry would cease to pay its share of the debt outstanding after the date of the sale.

2. For grant purposes, revenues from the leasing or the sale of school property under the above conditions should be reported separately from revenues accruing from rental or sales of other school property.

How The Study Was Organized

A Study Steering Committee made up of three representatives of the Etobicoke Board of Education staff, one representative of Metropolitan Toronto School Board and a consulting architect invited applications from consultants and selected seven professional firms to carry out detailed studies in their respective fields. These are the people who have done the bulk of the work involved in the study. Their findings and recommendations constitute the body of this report. Appreciation is also due many other individuals and organizations who assisted in many ways.

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A Place To Call Home

Some Social And Design Requirements

Architectural Consultant – Mr. J. Duncan
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It will take flair and sensitivity to transform an institutional building such as a school into a place to call home.

The elderly residents who come to live in the schools may be leaving homes filled with years of fond memories. At the very least, they will feel unsettled. Cold, stark and impersonal surroundings would only magnify the other stresses of old age such as retirement, failing health and the death of a spouse.

Fortunately, many schools will have some attractive features beyond those of newly constructed buildings. Many are located in established neighbourhoods. They have ample yards and are only one or two storeys in height.

Often, land for new senior citizen apartments is found on the outskirts of communities. Most residents are forced to move away from friends and familiar neighbourhoods with their clubs, churches, parks and shopping districts. A chance to find inexpensive, convenient housing in the old neighbourhood – even in a school – would be welcomed by many. In fact, as soon as the idea of converting schools was discussed publicly in Etobicoke, there were people calling to get on a waiting list.

The most desirable schools will be those convenient to a wide range of community services – drug and grocery stores, banks, medical services, libraries, formal entertainment and public transportation. Throw in pleasant scenery and some form of activity to watch and there will be hardly anything to ask for. And, living on or near ground level will encourage full use of the out-of-doors for relaxation and hobby activities such as gardening.

Future residents will, of course, expect some architectural changes to make the school resemble homes. A few new partitions and domestic plumbing won't be enough. The new surroundings must meet various physical, psychological and social needs.

It will be essential to modify such items as painted brick walls, high ceilings of acoustic tiles and fluorescent lighting. Carpets in corridors and lounges, brightly painted drywall, comfortable furnishings and paintings will do a lot to create a residential environment. Long, wide corridors should be broken up by a series of sitting areas and storage cupboards. Exterior space can be landscaped to create a varied and pleasant natural environment.

Individual suites should offer privacy, comfort and, most importantly, personal identity. It is difficult to feel at home where one does not have the freedom to decorate according to personal taste or to include treasured possessions. Equally, a small apartment is needlessly confining if the arrangement of furniture is fixed arbitrarily by the location of various utility outlets.

The Ontario Housing Corporation (O.H.C.) sets

minimum standards for the design of apartment units for senior citizens. Where financially possible, it would be desirable to exceed these standards.

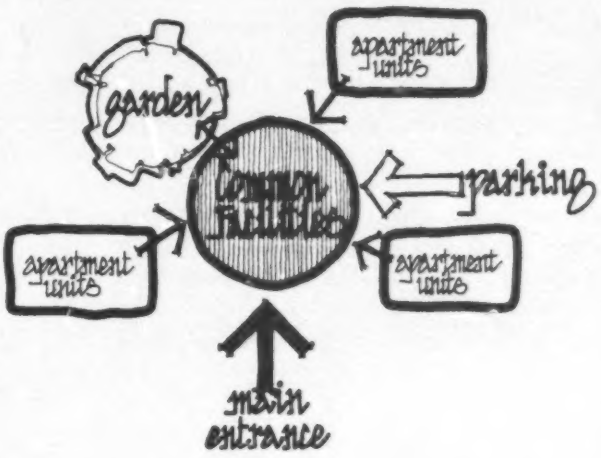
Generally, OHC residents find there is not enough space for their older furniture and keepsakes. Dining areas are only large enough for two which makes it difficult to entertain guests. Kitchen shelves are sometimes too high and counter space insufficient.

In bedrooms it is useful to have space for an oversize bedside table to hold medicine, water, tissues, etc., in larger quantities than a younger person normally requires. The arrangement of space should allow the bed to be placed where one could look out the window. Access from the bed to the bathroom should be short and direct. It would also be helpful to have a buzzer by the bed to call for assistance and a bedside lamp that can be operated by a switch at the door. Bedrooms should be at least 120 square feet in size, whether each is to be occupied by one person or two. To compensate for the lack of a bedroom in bachelor apartments, an alcove would provide a degree of privacy and shielding from hall noises.

Bathrooms should have non-skid bathtubs and grab bars.

Private apartments must be quiet places for residents to be alone, follow their own schedules and entertain friends and family. The shared spaces in the building – recreation rooms, lobby, hall and laundry room – help bring residents together to enrich each other's life. Like the church foyer or the general store in a small village, these are the places to mingle, meet friends, share gossip or just sit and watch the world go by.

The difficulty in designing these public portions of the building is to ensure they are inviting without intruding upon each resident's need for privacy and independence. Residents will want the freedom to join group activities some times, and simply pass by unnoticed other times. Similarly, guests won't feel comfortable if they feel as though they are passing through the living room of strangers.



A lounge near the door can serve two purposes if properly designed. It can provide a comfortable place to wait for a taxi or friend's car and it can be a gathering place for those who like to sit and watch others come and go. A good view is important in either case, but those passers-by who do not enjoy being greeted will want some feeling of privacy. Partial screening with planters between the lounge and the primary path might be a compromise to satisfy everyone.

Privacy will also be important to some groups. At times, an intimate family gathering cannot be accommodated in an apartment, so areas within the shared spaces should be provided as an alternative. These spaces would be used at other times by a men's club, perhaps, or a card group that doesn't want interruptions.

These secondary spaces could be clustered around a large community room that would be used for tenant meetings, bingo games, dances or religious services at different times. It should be possible for several different activities to go on at once without distractions. One should not have to go directly through the community room to enter the secondary spaces, but the knowledge that others are nearby provides a greater sense of togetherness and community.

Ideally, the cluster of social spaces should extend outdoors. In nice weather, residents could take part in such activities as shuffleboard, badminton, horseshoes, lawn bowling or simply relax on benches or stroll through gardens.

To simply provide shared recreational space is no guarantee all residents will use it. The shy, the insecure and the physically disabled will resist giving up the security of their apartments if the rewards don't outweigh the risks as they perceive them. The physically disabled will find it a chore to walk any distance. The shy and insecure will avoid passing the places where cliques gather or where they may feel rejected. The rewards for venturing into the public areas will include meeting friends and joining in activities. Even if the spaces are empty, a different view of outdoor activity or a change of environment can be enjoyable. Residents will be more likely to take the risks and sample the rewards if it is easy to investigate what is happening quickly and without too much commitment. Therefore, activity areas would be best placed near the primary path between apartments and the entrance, mail room and laundry room.

One additional concern about the placement of activity areas is noise. Apartments should not be too close to noisy areas, particularly the laundry room, with its machines and the frequent use by tenants. Yet the laundry room should not be so far away that residents have a long way to carry their bundles of clothes. It might also be near a lounge so residents will have a pleasant place to wait, and be supplied with natural lighting and ventilation.

Other general design considerations include adequate provision of storage space and, in suburban locations, parking space for at least one car per unit. The parking should be as handy as possible to apartments to make it easier for carrying in packages.

Finally, there is a major concern that is unrelated to building design; this is that the landlord and management should be sensitive to the needs of the elderly. If they are not, all efforts to eliminate an institutional atmosphere will be defeated.

Three Case Studies
Detailed Architectural Recommendations

Architectural Consultant — Mr. J. Duncan

Three schools were examined to determine what architectural changes would be desirable, practical and economical to create attractive residences. All three have between 25 and 50 years of useful life ahead. They are of concrete block construction, with brick exteriors, large windows, flat roofs and one or two-storey wings. There are terrazzo floors in the wide halls, tiled floors in classrooms. Long lines of lockers run along corridors in the secondary school. Dividing walls between classrooms could safely be removed during renovation without affecting the structural strength of the buildings. Outside, the schools have large, flat yards with a minimum of landscaping and plantings. Surrounding neighbourhoods consist mostly of single-family homes. Bus routes pass near each school and there is neighbourhood shopping nearby.

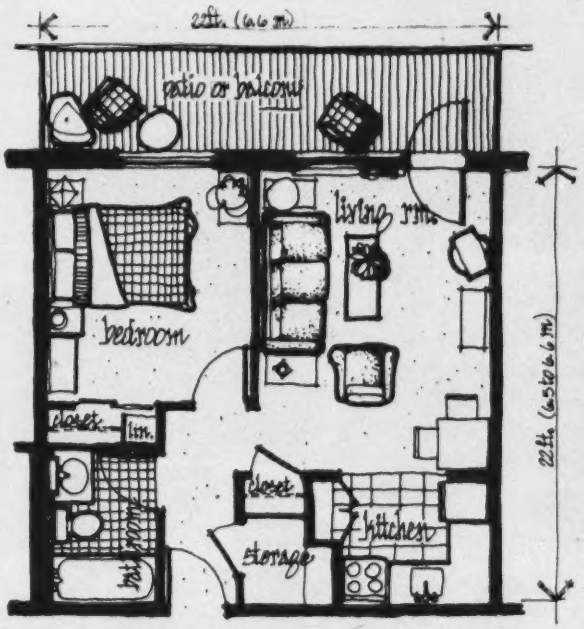
The adaptability of any school to successful housing is dependent on the size and layout of each individual school and must be investigated as a definite element in any conversion. All three design plans for the schools in the study were determined by the physical size and shape of the buildings.

Following are the suggested design elements that might be incorporated into all the schools if they were converted to senior citizen housing. Features peculiar to the individual schools are discussed later.

Apartment Units

The requirements of the Ontario Housing Corporation were used as the basis for unit designs, although it was generally possible to make units more spacious than called for by OHC. Floor plans were drawn for one-bedroom and bachelor units as well as for a one-bedroom unit intended for a handicapped resident. The structural layout of existing buildings and standard classroom sizes determine the usable size of bedrooms.

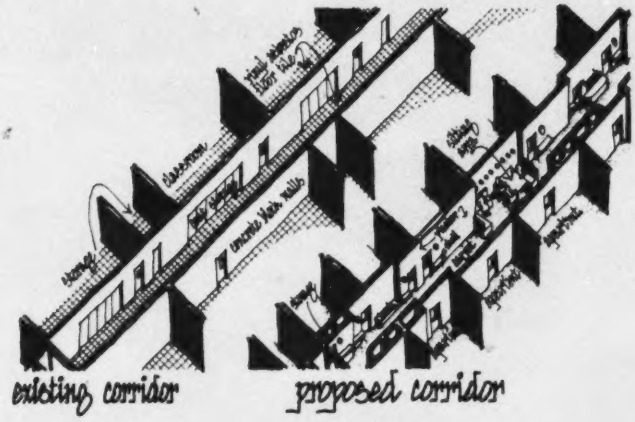
One-bedroom units are preferrable to bachelor apartments because they are more adaptable to the needs of residents. An effort was made to provide a maximum number of one-bedroom suites in each building design. The bachelor units do, however, allow enough space for the bed area to be partially divided from the living space which has a generous floor area.



typical one bedroom apartment
approx. 500 sq ft. (gross fl. area) (a.h.c.)

Corridor Treatment

There are various ways to make wide school corridors interesting and useful for residents. Carpeting and new finishes for walls and ceilings are obvious changes. It would also be necessary, without restricting fire exits, to provide attractive adequate storage, cupboards, and benches for resting and talking. A shelf at each door could be a place for plants or a spot for someone, fumbling to find keys, to rest grocery bags or parcels. A small window in the door or beside it is suggested, as well as a light, to create the indoor impression of a porch. Street names would give different corridors their own identies.



Window Treatment and Awnings

Most school windows are larger than those in residential buildings and larger than desirable in this age of energy conservation. Insulated panels used to replace portions of the window area would reduce winter drafts and summer heat gain. Along with awnings, they would add color and help give the buildings a more residential character. Awnings have the added benefit of allowing residents to control the amount of light entering their rooms.

Private Outdoor Gardens

Private gardens outside all ground floor apartments would greatly enhance residents' enjoyment of their new homes. Each garden could include a patio, shade tree and grass, and be enclosed by a combination of privacy fence, shrubbery and low boundaries. The space would be a place to relax, entertain, grow flowers or vegetables and, perhaps, attract birds with a feeding station.

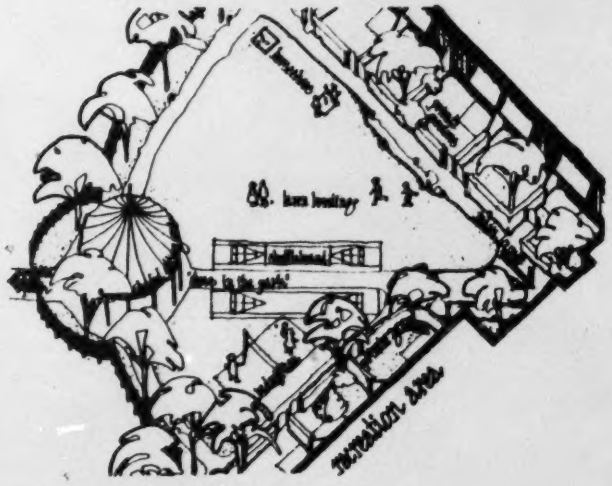
Roof Garden and Garden Plots

Unfortunately, a realistic budget will not allow for the addition of balconies to second floor apartments. As an alternative, a roof garden could provide a convenient outdoor sitting area.

Garden plots could also be established on the school grounds for second floor residents to cultivate vegetables and flowers. Plots not used by residents could be leased to members of the surrounding community.

Recreation Areas and Common Facilities

Recreation areas should be provided both inside and outside the building: a common lounge area, crafts rooms, small sitting areas in corridors and, outside, lawn activities such as shuffleboard, badminton, croquet, horseshoes and shaded promenades.



Protected Boundary

It will be important to establish for the senior citizen building a new identity separate from any portion of the school yard that remains as a public park. This will enhance the residents' feeling of security and privacy. The most economical and attractive boundary would probably be a low, decorative fence and a row of trees. This boundary would not prevent residents from watching and speaking to children who come to play in the public park. Yet it would signify that uninvited encroachments are not encouraged. Low hills or berms could also be useful for this purpose.

Gates at the main entrance would be a component of the boundary to assist in establishing a new identity for the building. The gate need not be elaborate, but could include a sign to indicate the name of the building.

Vehicular Traffic and Parking

Ontario Housing Corporation standards call for three to four parking spaces for every ten apartments. But in suburban locations there will be more residents with cars and a greater need for visitor parking. Special wide spaces close to the main entrance should be provided for use by handicapped persons.

There should be space at the main entrance for cars to discharge and pick up passengers. This arrival point should have a protective canopy to shield people from the rain and snow and also add to the residential character of the building. Parking spaces for the handicapped would need to be located close to specialized apartment units which they would serve.

Security

The main entrance to each building should be

equipped with an intercom and door release system connected to each apartment. Residents must have control of entries to the buildings by non-residents.

Martin Grove Gardens Junior School

Martin Grove Gardens Junior School was built in 1959, an addition in 1963. It is located in the centre of a residential community of primarily single-family homes. There is regular bus service on the road in front of the school, a neighbourhood plaza with 8 to 10 stores adjacent to the north, a park to the west and homes to the south.

About 3.5 acres of its 6.5-acre site is a flat, grassed playing field. In addition to a 31-space parking lot, there is half an acre of paved playground. There are 30-foot high maple and crab apple trees along the street, Celestine Drive, and on the north side between the school and the parking lot.

The single-storey building has a central corridor system serving 15 classrooms, one kindergarten, one general purpose room with a stage, one resource centre, washrooms, administrative area, boiler room, service rooms and storage. The total floor area is 32,137 square feet.

Martin Grove Gardens Junior School

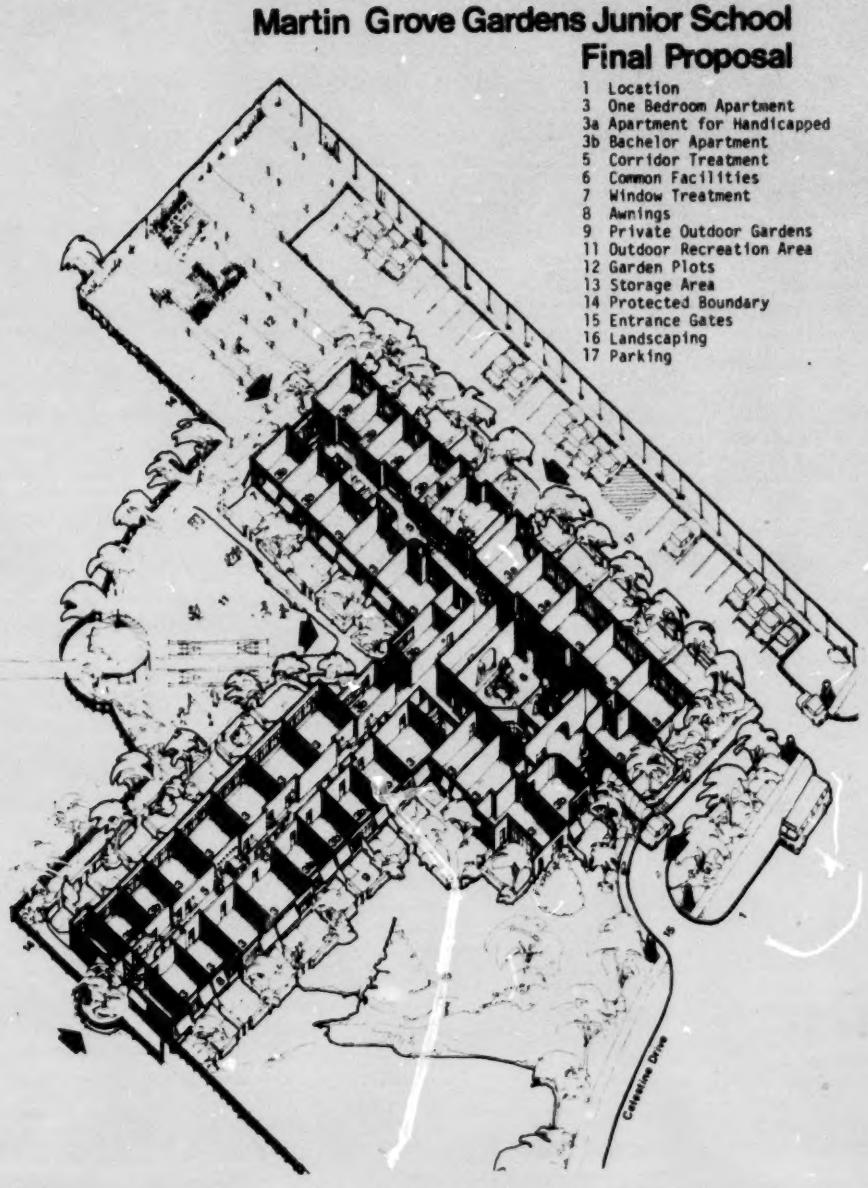
The solid masonry building has a soft brown brick exterior finish with windows covering a majority of the exterior walls in the classroom wings. Windows are double-glazed. Corridor walls have a brick facing at regular intervals which creates a warm, pleasant character. Hall floors are terrazzo, while the classrooms have asphalt tile.

The entranceway has some attractive brick detailing, plus a low entrance wall of field stone. There is an interesting arrangement of rooms around an attractive lobby and general purpose room entrance.

The building could be converted to create 39 apartments, including 20 one-bedroom units, 17 bachelor units and two units equipped for handicapped persons.

The conversion should include a common lounge and kitchen, laundry room, washrooms, administrative offices, crafts and recreation area and storage areas. Outside, there should be public and private gardens, a shuffleboard area, driveways and parking area.

Because of the central location of the general purpose room, apartments cannot be clustered as successfully as in the other elementary school studied. Modifications must be made to ensure privacy for units around this public core.



Conversion Plan, Martin Grove Gardens Junior School

Rexdale Junior School

Rexdale Junior School was built in 1954 and in the next ten years there were three additions. It is located in the heart of a residential community and surrounded by single-family homes. Neighbourhood shopping is a three to five minute walk away and a regional shopping centre about three-quarters of a mile away. A bus route runs along the school street.

There are three acres of flat playing field and a half-acre asphalt playing area on the six-acre site. A large front lawn has ornamental shrubbery and a number of medium-sized trees. The lawn is protected from the playing fields by a black, ornamental fence.

The north wing of the school has two storeys while the remainder of the building has one storey. The total floor area is 36,760 square feet. There are 19 classrooms, two kindergartens, a general purpose room with a stage, a resource centre, health room, administrative area, staff room and mechanical, electrical maintenance and storage areas, plus washrooms.

The building's walls are solid masonry with glazed interior blocks and exterior bricks with a red rug finish. Large windows cover up to 80 per cent of the exterior walls.

The general character of the building is plain, predictable, sterile and institutional, without the attractive-

Rexdale Junior School

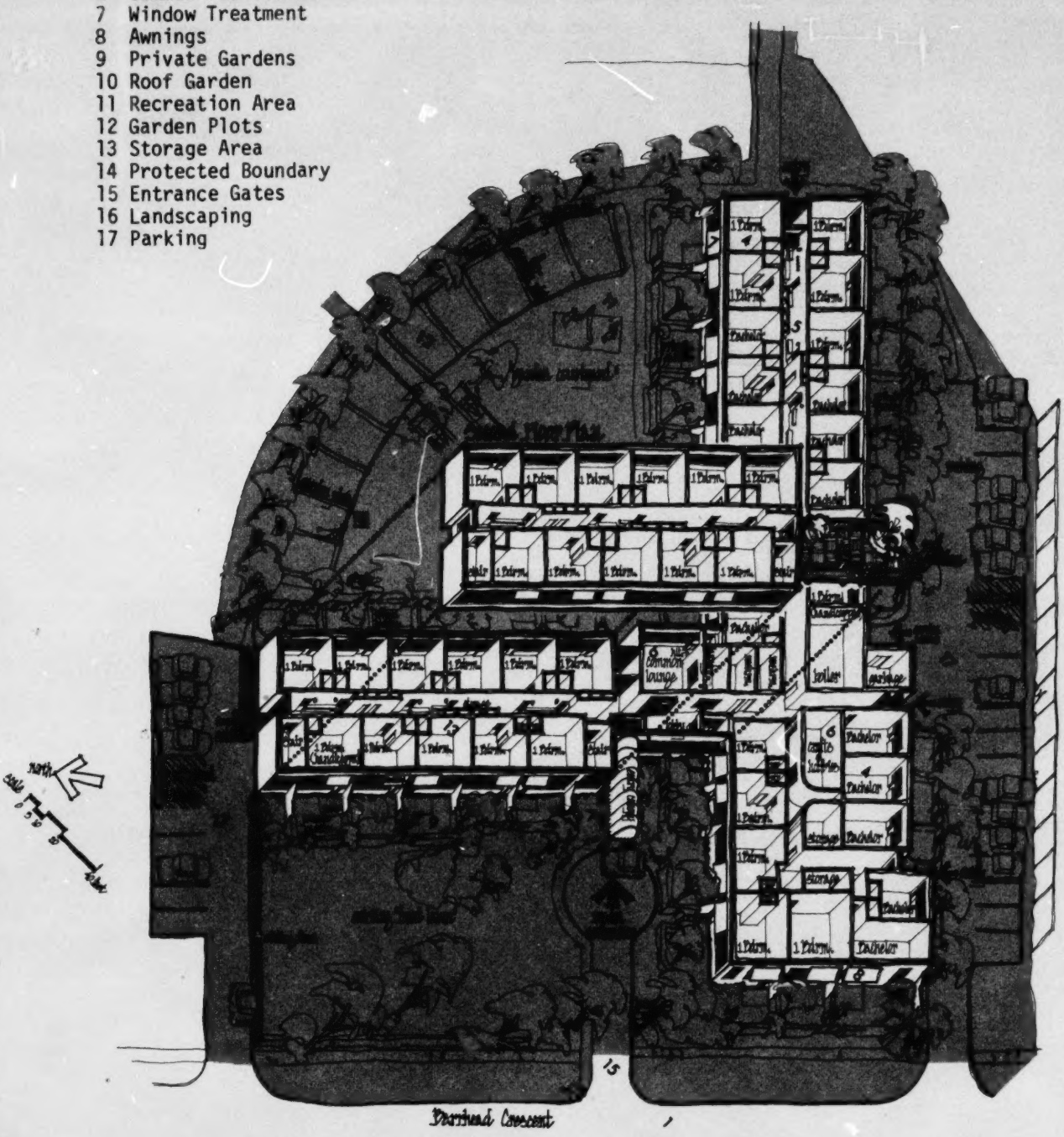
ness of Martin Grove Gardens. However, Rexdale's layout allows for a more successful clustering of apartment units than Martin Grove.

The school could accommodate 49 apartments after conversion, including 31 one-bedroom units, 16 bachelor units and two units for handicapped residents.

As in Martin Grove Gardens, the conversion should include a common lounge and kitchen, laundry room and washrooms, administrative offices, a crafts room and storage area. There should also be a health room and garbage room. Outside, there is space for gardens both public and private, a shuffleboard area, driveways and parking areas. There should also be an exterior shaded sitting area.

Rexdale Junior School
Final Proposal

1 Location
4 Apartment Locations
5 Corridor Treatment
6 Common Facilities
7 Window Treatment
8 Awnings
9 Private Gardens
10 Roof Garden
11 Recreation Area
12 Garden Plots
13 Storage Area
14 Protected Boundary
15 Entrance Gates
16 Landscaping
17 Parking



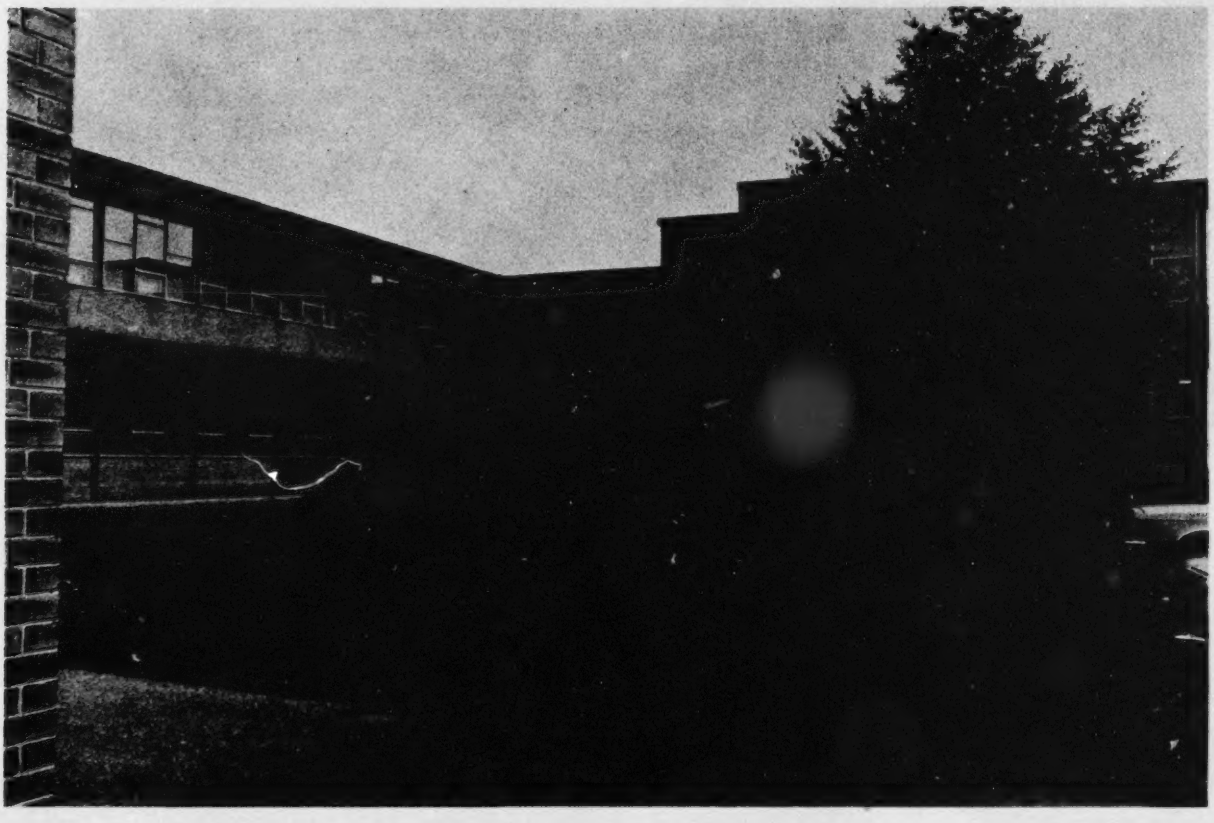
Conversion Plan, Rexdale Junior School

Royal York Collegiate Institute

Royal York Collegiate is a large secondary school, built in 1954 and added to seven times before 1972. It has a floor area of almost 135,000 square feet and rooms to accommodate up to 1,530 students.

It is located in the centre of a community of single-family homes on a major arterial road with a bus route that connects to a subway station. A major commercial area is located within 1,500 feet of the building. The north side of the property is bounded by a small ravine and an easement for power lines. Slightly farther north there is a vocational school, a senior citizen home and a church. There is a primary school site on the east side of the property.

The 10.4-acre site on the east side of Royal York Road has a 70 car parking lot at the south end of the school, plus a service road leading back to the



A partial view of Royal York Collegiate

cafeteria kitchen area. The rest of the property is grassed and very flat except where it begins sloping toward a ravine at the north end of the site. The only landscaping is some mature shrubbery at the front of the school. A quarter mile cinder track on the east side of the school surrounds a full-sized football field. Steel framed bleachers are located on its east side.

The scale of the school is massive. It includes such major facilities as a 200-seat cafeteria, a theatre auditorium, a 7,500 square foot gymnasium, wood and metalwork shops, library and resource centre. During the course of growth of the school, one courtyard was created along with a series of long wings projecting east from the administrative area. Some of the halls are more than 300 feet in length. Following is an inventory of the rooms:

33 standard classrooms
3 commercial classrooms
1 commercial practice room
1 merchandising classroom
1 music room and storage
1 art room and storage
3 physics rooms
1 biology room
1 general science laboratory
1 chemistry room
1 general science classroom
1 wood working shop
1 metal working shop
1 home economics room
1 sewing and fitting room
3 gymnasiums and instructors' rooms
1 preparation room
1 library and workroom
1 auditorium, stage and projection room
staff rooms and staff washrooms
student washrooms
dressing rooms, showers and team room
1 cafeteria and kitchen
1 dark room and committee room
1 resource centre
3 seminar rooms
duplicating room
storage - athletic, general, merchandising
administrative offices
guidance and counselling
health room
caretakers' rooms
heating and mechanical service
transformer room

Royal York is by far the most institutional of the three schools in the study, mainly because of its size. It has the same concrete block walls on the interior, large expanses of windows and plain, non-decorative details of the other schools. Also it has the same terrazzo floors in corridors, acoustic tile ceilings, fluorescent lighting and vinyl asbestos classroom floors. In the halls there are long lines of metal lockers along the walls. Exterior building surfaces include beige faced brick, copper flashing, aluminum framed single-glazed windows and heavy, reinforced, vandal-proof doors.

A Comprehensive Plan

The school's size allows for the development of a full range of accommodation for senior citizens, from apartments, such as in the elementary schools, to dormitory accommodation for those people requiring some dependent care. There could be separate residential clusters for the two types of accommodation. But everyone would have the opportunity to mix in the main centre of the complex. Independent residents might help brighten the days of the immobile residents, spending time with them and taking them for walks.

Such a combination of housing types would allow couples to stay together when one partner is totally dependent on medical and support services while the other is mobile and independent. It also would save people from moving several times if they run the progression from being independent, semi-independent and possibly totally dependent in their latter years.

The idea of including nursing home care in a school was rejected. It was felt that the building and staffing requirements of providing continuing care for the dependent elderly placed unrealistic constraints on the planned conversion.

Residents would have an opportunity to mix with the surrounding community if facilities were provided for the use of both groups in the main centre of the complex.

An art gallery and workshop could be established in the double gymnasium. There could be a community day care centre, where residents might provide volunteer assistance. The small gymnasium could be used for shuffleboard and indoor bowling by residents and for other sport activities by the community. The large theatre auditorium might attract outside theatre groups or be used by residents for their own entertainment events and, perhaps, church services.

Other space in the building would contribute to a varied, interesting and convenient life for residents. Workshops, a library, meeting rooms, craft rooms, games rooms, a combination tuck shop and pub, as well as a barbershop/beauty salon are called for in the proposed design.

Bed-Sitting Rooms

The housing for dependent residents would include one and two-bedroom sleeping accommodation with shared sanitary facilities and small sitting areas, kitchens, special baths and storage space. There would also be an area of specialized care of the most dependent residents.

The scale of such a home would require permanent staff for administration, maintenance and nursing.

These rooms are intended to meet the general requirements of the Ministry of Community and Social Services. The two-bedroom sitting rooms are suitable to accommodate one or two single beds, storage space, a vanity or work space and a small sitting area or lounge.

The structural system of the bed-sitting room areas allows for the removal of interior walls to provide appropriate room sizes and common care facilities.

Corridors are generously wide and include space for storage cupboards. In addition to new carpeting, drywall and residential lighting to provide a residential decor, handrails would be provided throughout the building.

Washrooms, storage, kitchenettes, specialty baths, a nursing station and janitor closets are all included in central islands in bed-sitting areas. This would allow for central plumbing services and would free window areas for more effective use.

Special Care Area

A special care area would accommodate the most dependent residents in periods of illness or unusual circumstances. The area would have a medical examining room, special sanitary services and special, more continuous staffing services.

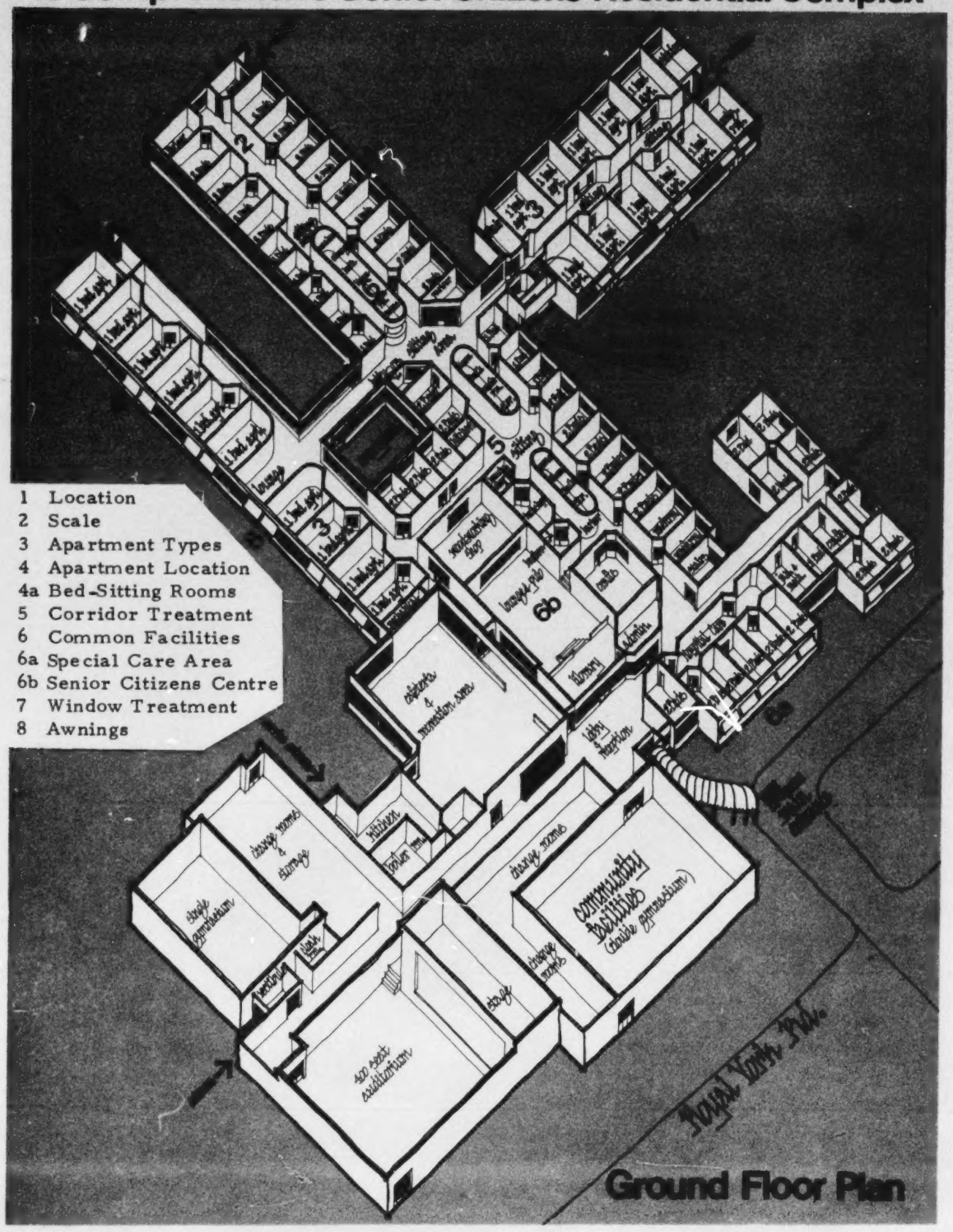
Elevator

The size of a secondary school makes it economically possible to include an elevator which would be necessary to give less mobile residents access to second floor areas.

Stairs

Ontario Building Code requirements would call for the addition of a fire exit stair at the junction of the two two-storey wings. There would also be a new secondary entrance at the same location.
This is where the elevator would be situated.

"A Comprehensive Senior Citizens' Residential Complex"



Conversion Plan Royal York Collegiate

Recommended Facilities

The building complex would include the following main components:

a) Independent senior citizens apartments:

28 one bedroom units
2 one bedroom handicapped units

b) Home for the aged including:

56 two bed sitting rooms
27 one bed sitting rooms
2 six bed sitting rooms
common washrooms
baths
nursing stations
sitting rooms and parlours
kitchenette facilities
linen storage (clean & soiled)
maintenance rooms
meeting & games rooms
a full cafeteria facility capable of accommodating all residents & staff
6 two bedroom special care rooms
medical room & examination room

c) Senior citizens centre which would serve both the residents and elderly in the surrounding community:

library resource centre
pub-tuck shop
woodworking and metal working shop
crafts room
games room
barber shop
beauty salon
small inter-denominational chapel

d) Community facilities, to be a resource for the general use of the community and for the residents:

a full-size theatre
a large double gym
a small single gym and all change areas
storage and washrooms

Review of the Design Studies

Rexdale and Martin Grove Gardens

The three suggested designs were evaluated from the point of view of an advocate seeking the best possible housing for future residents. As is always the case, compromises have been made and final designs are not without their limitations. Yet the designs are superior in most respects to senior citizen housing that is currently available to residents of Metro Toronto.

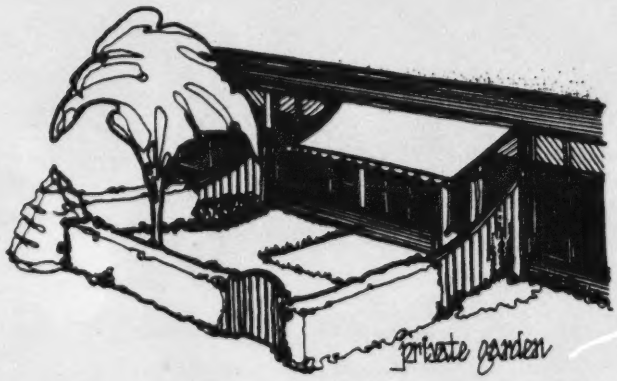
As will be seen later, the favorable opinion of the consultants was shared by a group of senior citizens who were asked to evaluate the Martin Grove Gardens design. This is the least adaptable design, but it was enthusiastically approved by the senior citizens with only some minor reservations.

The designs for both Martin Grove Gardens and Rexdale have several positive features and meet the requirements of senior citizen housing set out earlier. Ample opportunities for privacy, social interaction

and enjoyment of the surroundings appear to be afforded.

All units would be sound-proofed to the standards of the Ontario Housing Corporation and should provide separation from noisy community activities. An attempt has been made to separate sleeping areas from the more public spaces in the units.

All ground-level apartments are provided with private patios enclosed by a low fence or shrubbery to allow for viewing private open space or parkland. A small number of units are, however, adjacent to the parking lot. Private open space could not be provided to the second-floor residents of Rexdale. As a desirable alternative, there are garden plots adjoining the communal outdoor area and there is a roof top garden. Small meeting rooms could not be provided in these schools, but the sitting areas in the corridors offer an inexpensive solution to the problem of group privacy.



The arrangement of shared spaces in the Rexdale design is particularly successful in allowing residents a choice between privacy and social interaction. These spaces are located so that it is not necessary to pass through them en route to individual apartments. The lounge is centrally located, adjacent to the main building entrance and the exit to the communal outdoor space. This will allow residents to casually inspect activity in the lounge and decide whether or not to join in. The school lobby has been retained and provides an excellent place for residents to sit and watch the entranceway of the building. There is sufficient separation from residential units and space for screening to give passersby a measure of privacy.

The separation of the laundry facilities, the offices and the health room from the lounge at Rexdale would further enhance the ability of residents to decide when to seek social interaction.

To increase the number of units, the lobby in Martin Grove Gardens was not retained. This eliminated a highly desirable place for residents to sit and watch the activity of others.

Communal Facilities

Small buildings such as Martin Grove Gardens and Rexdale cannot be provided with extensive recreational facilities for economic reasons.

In both suggested designs, a lounge and crafts room have been provided for residents to gather, talk and have formal activities such as card games, bingo or crafts. A communal kitchen adjoining the lounge will be useful when this area is used for meetings, parties or dances.

The lounges are located near the main building

entrances so visitors or guests attending activities will not need to intrude on the residential areas of the building. At Martin Grove Gardens, it was not possible to provide direct access to the outdoors because of a decision to maximize the space alloted to private patios. It has been necessary to settle for some window space that will at least provide natural lighting.

In addition to the formal recreation areas, there are numerous small sitting areas in corridors. These are admirably suited to quiet chats or games such as chess, and provide a relatively private space for small groups to meet.

Financial constraints made it necessary to restrict facilities for active outdoor recreation, such as shuffleboard, badminton, horseshoes and lawn bowling. Emphasis was placed instead on extensive landscaping, garden plots and sitting areas because of their contribution to the creation of a residential environment. Also, it was assumed, that active recreational opportunities are generally provided by the municipality.

The need to provide a maximum number of apartment units prohibited the inclusion of specialized recreation rooms. Hobby rooms, woodworking shops, special games and music rooms are desirable features that should be included in larger developments.

Laundry Room

At Rexdale, the laundry room is self-contained and easily accessible to the majority of the apartments. It is sufficiently separated from the living units and recreation areas to minimize the noise and nuisance of its operation. At the same time, the lounge is accessible to people waiting for their laundry. Unfortunately, there are too few units on the upper floor to justify a second laundry room and these residents will have stairs to climb with their laundry. Also, the emphasis on providing the apartments with exterior wall space has resulted in a laundry room without natural light and ventilation.

Royal York

The concept of combining a home for the aged with housing for independent senior citizens is desirable for a number of reasons. Mobile residents will probably not be disturbed by close contact with residents who require limited nursing care for approximately 45 minutes per day. They might, however, have found it depressing if a nursing home section was included in the building.

The most important benefit of the combination is that residents will be able to remain in the same building as their physical abilities diminish. It is important to have the continuity of a familiar environment, established friendships and ties to family and community. In addition, independent residents will probably appreciate an opportunity to assist less mobile residents and contribute to their welfare.

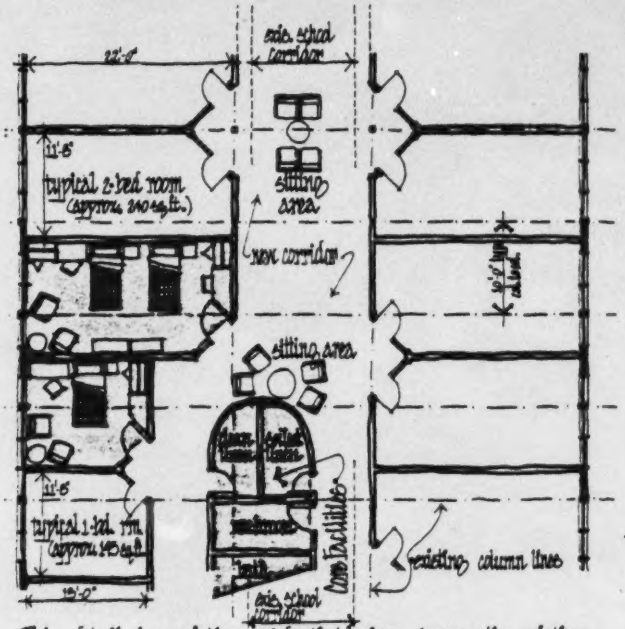
The possibility of bringing residents together with the outside community by providing shared recreational facilities is an equally positive element of the design.

For elderly residents living outside the complex, it will be an interesting place to visit, meet people and, perhaps, get a pleasant introduction to a style of life they may later choose for themselves. Knowing of an acceptable alternative to maintaining a private household might offer some security to senior citizens who are beginning to lose their physical capabilities.

Keeping elderly residents active and integrated in the community is difficult and consequently important, in a complex the size of Royal York Collegiate. But an opportunity to keep in contact with adults and children will be provided if community events are staged in the building and residents feel free to join in. Opportunities for employment may also be available for the residents at the day care centre or assisting staff in the operation of other facilities in the complex.

Another important consideration in continued community use of the building would be to ease the transition of the school from exclusively public, institutional use to private residential use. The community will view the new use more positively if major facilities in the building remain a community resource.

The proposal for conversion of the school would afford the new residents many opportunities for recreation and social interaction. The woodwork shop, gymnasium and auditorium have all been retained to provide a series of unique recreational opportunities. Other indoor facilities, such as a library, and crafts and games room are complemented by extensive landscaped grounds with benches and outdoor recreation facilities. Finally, a series of small areas for meeting and talking have been placed throughout the building. In each residential corridor there are small sitting areas, parlors, and lounges for neighbours to sit in relative privacy.



This detail plan of the residential wing shows: the existing column grid, the relation of the old corridor to the new corridor, the location of common facilities in the centre of corridors, typical residential rooms, and common sitting areas.

The extensive and varied recreation facilities can lead to the establishment of a number of clubs, such as for drama, crafts, gardening and woodworking. All of these can help to foster a deep and personal attachment to Royal York and contribute to a satisfying residential environment.

There will also be many opportunities for more passive forms of entertainment. The large window area in each unit and bed-sitting room will provide all residents with excellent opportunities to sit and look out over the grounds. The arrangements of apartment units ensures that the areas surveyed are public areas where interesting activity is likely to occur, but where surveillance represents no threat to the privacy of others. Private patios would have a low hedge and fence to allow an unobstructed view.

The importance of the lobby as a place to sit and watch the activity of the building has been recognized in the design. It is an area large enough to allow for some screening and is sufficiently separated from residential units so that those who pass by should not feel onlookers are intruding unduly on their privacy. Yet the lobby is ideally located to provide a view of the major entranceway to the building and the corridors that house the major communal facilities.

It was not possible to provide the second floor apartments with balconies or to provide the bed-sitting rooms in the home for the aged with private outdoor space. But, to compensate partially for this omission, the grounds have been generously landscaped and a series of semi-private sitting areas have been developed in the courtyards.

In other ways, the suggested design for Royal York provides a sensitive balance between opportunities for social interaction and private enjoyment of the building. All of the facilities to be kept open for community use have been carefully segregated from the residential areas to protect the privacy of residents and the residential atmosphere of the building.

In general, residential areas have also been separated sufficiently from residents' communal areas. The exceptions are those rooms along the main corridor to the parking lot and those adjacent to the crafts room and commercial facilities. Original plans designated these as non-residential but had to be changed to increase the total number of beds in the home for the aged.

It is important that there has also been provision for sufficient separation between the apartment units and the home for the aged. The lifestyle differences and the requirement that residents of the home for the aged use communal bath and shower facilities necessitates the sharp separation of these areas. Consequently, each corridor is reserved for a single type of senior citizen accommodation. Most of the communal areas of the building are accessible to the apartment units without going through the corridors of the bed-sitting rooms.

In the home for the aged, private and semi-private rooms are provided instead of the customary wards. This greatly increases the resident's privacy.

Two final design features worthy of comment that are peculiar to Royal York are the location of the parking lots and the provision of geriatric facilities.

There is a sufficient number of parking spaces for residents and visitors but there is a major separation of the parking lot from the apartments in the northern part of the building. While this separation will create problems for some residents, it was considered

more important to provide all units with uninterrupted physical and visual access to the grounds.

A number of special facilities to serve the needs of residents of the home for the aged are provided, such as special nursing stations and health rooms. While the cafeteria would provide meals to these residents, it might also be used by apartment tenants who choose not to prepare their own meals. An infirmary allows for the short-term segregation and care of residents who become ill.

What The Prospective Occupants Have To Say

A User Evaluation Study

Sociological Consultant – Dr. P. Homenuck

An essential part of the feasibility study was the evaluation of the school designs by senior citizens. Limited resources prevented a user evaluation of each school, but, fortunately, major design components are similar in all three. Comments made about Martin Grove Gardens Junior School generally apply to the rest. Only the over-all housing concept for Royal York Collegiate, which combines independent apartment units with a home for the aged and community recreational facilities, was not assessed.

Two groups of 25 senior citizens met for three hours at Martin Grove Gardens. They toured the building before hearing an explanation of the proposed conversion and taking part in a structured discussion session. Participants were also asked to complete two exercises. The first was a trade-off game to establish preferences for design elements being considered for elimination to reduce costs. The second exercise was to determine the importance attached to living near a number of community services and facilities.

The majority of participants lived in Metro Toronto senior citizen housing in Etobicoke. They were chosen because they could speak from personal experience about such key issues in senior citizen housing as the suitability of bachelor units, the desirability of communal facilities, management policies and unit designs. Other participants still maintained their own homes or lived in unsubsidized apartments. While a few participants experienced problems with hearing or were partially dependent on wheelchairs, all were potential tenants of apartments designed for independent elderly households.

The senior citizens generally supported the idea of converting under-utilized schools to housing for the elderly. They appreciated that school enrolment is declining at the same time as the number of elderly persons is increasing. It seemed logical to them to adjust the use of schools to reflect the changing age composition of the population. While there was no hesitancy on their part to live in a former school, they suggested a series of other uses that might be considered. Their prime concern was the availability of recreational facilities and senior citizen clubs.

Despite a general acceptance of the idea, participants had some concerns about its feasibility.

A number of the senior citizens came from an area of southern Etobicoke where there are old, multi-storey schools that have a great many stairs and are not as attractive as those studied. Participants were relieved to learn the study is concerned with a more modern, single-storey or two-storey school.

There was also concern that converted schools would not provide a sufficiently permanent residence. If the school-aged population were to grow, they asked, would the building be needed again for school purposes? They said they would not want to establish themselves in a neighbourhood, only to be forced to move away from friends and family in their later years.

Participants wanted assurance that neighbourhood residents will support the conversion of schools to housing and that senior citizens will be accepted in their new communities.

Finally, they were skeptical that the government would accept senior citizen housing in a single-storey

building with a larger than average number of one-bedroom units and private yards. The design was, in short, too good to be true.

Major Design Issues

Private Yards

A majority of participants in the evaluation lived in high-rise apartment buildings where small balconies constitute the only form of private open space. The possibility of having private yards with every apartment unit was enthusiastically received. The yards, they felt, would provide a major focus for enjoying the company of neighbours and friends. They approved of the small patio with a hard surface for lawn furniture and wheelchairs and suggested the patio should be accessible from the apartment unit without going over steps.

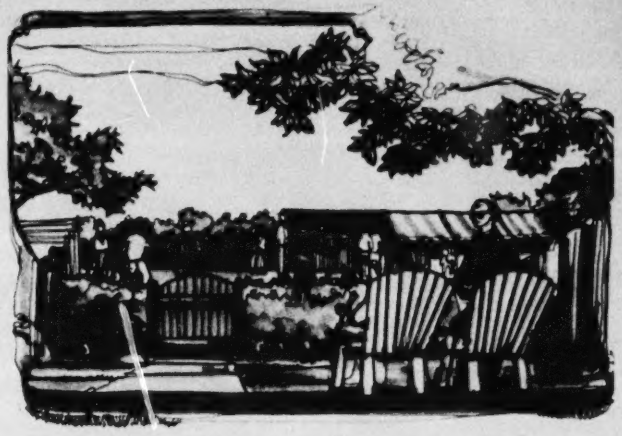
The low fence in the design was popular because it would not prevent neighbours from conversing or block the view of communal outdoor areas. The privacy of a high fence was considered unnecessary because apartments provide sufficient private space. A number of people referred to senior citizen housing as an extended family situation where social contact is highly desired.

Most participants rejected the option of extending private yards at the expense of communal outdoor area. They argued that a larger yard would simply increase their responsibilities for maintenance without significantly adding to the opportunities for entertaining. In addition, recreation facilities in the communal outdoor space were considered important to not only those taking part in activities, but to those who will enjoy looking on.

Access to a private yard was appreciated also because it could serve as an emergency exit in the event of fire.

Communal Open Space

It was suggested that the communal open space should be well landscaped with a number of trees for shade and a great many benches where people could sit and talk. A number of recreational facilities were called for, including shuffleboard, croquet, horseshoes and lawn bowling. But it was appreciated that the maintenance costs alone for some of these facilities would probably prevent them from being included in such a small development. Thus it was suggested that these facilities could be provided in the neighbouring park to be used jointly by residents and the general public.



There was concern that the suggested barrier between the apartment grounds and the adjoining park would be insufficient to keep vandals out. A majority of participants appeared to favor a chain link fence over a landscaped barrier of shrubs and trees, which would be more attractive and less institutional in appearance.

Garden plots were considered an added luxury in a complex already well-endowed with private and public outdoor space. They would represent a welcome alternative to the small balcony planting boxes serving the avid gardeners in the discussion group. However, not all of the participants would use the plots and some suggested they would need assistance with breaking the soil in the spring and with some of the heavier duties associated with gardening. A number of people related experiences with vandals and thieves destroying or stealing crops. They agreed this would be a major problem, particularly if the plots were located next to the public park and the road as shown in the Martin Grove Gardens design.

Apartment Units

The issue that generated the most heated discussion was the provision of bachelor units in the design. For a number of participants, the issue was one of basic personal dignity. They argued that every person has a right to a bedroom. They went on to explain their dissatisfaction with the limited space in bachelor units and the associated problems of accommodating furniture and entertaining guests.

The most outspoken critics were those people living in their own homes or in one-bedroom apartments. They could not contemplate moving into a bachelor apartment and many, in fact, appeared to have never heard of bachelor apartments. There were some defenders among those currently living in bachelor apartments. For these people, the units are ideally suited to their lifestyle. Their few possessions are easily accommodated and they appreciate the convenience and ease of maintenance. They felt a sleeping alcove provides sufficient privacy and argued that a neat and organized person would have no problem living in a bachelor unit.

Martin Grove Gardens design calls for slightly less than one half of the units to be one-bedroom apartments, considerably more than is generally provided in Metro Toronto senior citizen apartments. In the final analysis, the participants appreciated the efforts of the consultants to increase the number of one-bedroom apartments and accepted the cost constraints that force the inclusion of bachelor units. Participants living in senior citizen housing or waiting for units to become available were sensitive to the demand for affordable housing for the elderly. Consequently, they were unwilling to be overly critical of any concept that would provide housing at rents they could afford.

The issue of bachelor apartments had an added significance for couples participating in the discussion. The current practice of moving the surviving spouse from a one-bedroom apartment to a bachelor on the death of the husband or wife was vigorously attacked. Not only is the dislocation disturbing at a stressful time, but it leaves residents with the feeling they have no control over their lives. It would be wrong to leave the impression that the majority in the discussion group were bitter or antagonistic toward the housing authority because of its rules and regulations. But the tone of the discussion is particularly revealing given the concern to eliminate the institutional character of the schools when redesigned as housing. It is clear that management policies will have a great deal more to do with determining the institutional character of buildings than the design.

The interior design of the apartment units or the appliances and facilities in units were not part of the feasibility study. Nevertheless, participants took the opportunity to list a great number of complaints. Many were from older senior citizen housing facilities and had experienced major difficulties with the

design of units and the quality of their appliances. Their sources of complaints included: cupboards too high to reach; small, badly-located storage space; poorly insulated windows; windows difficult to open and close and without screens; stoves with controls behind the elements that were dangerous and inconvenient; refrigerators that do not keep food cold enough or are not frost-free; and, most importantly, bathrooms that were designed without showers and that were considered unsafe and difficult to use.

In addition, many participants complained of draughty rooms, poor heating and air circulation, windows that leak when it rains and, of course, the difficulty of having maintenance done.

Retired elderly persons spend most of their time in their homes, so it is vitally important that they be able to control their environment. If the units are not sensitively designed and properly constructed with the special needs of the elderly in mind, no amount of care and attention devoted to the conversion of a school can result in a successful residential environment.

Arrangement of Units

Participants appreciated the rationale for placing apartment units on the exterior of the building to ensure access to private outdoor space for each apartment. One concern related to the placement of some units near the lounge and laundry room where it might be noisy and, therefore, undesirable to live. Such placement should be avoided.

The Lounge

The lounge was viewed as an indispensible centre for leisure time activities and focus for the neighbourhood created by the senior citizen building. It was pointed out that such activities as lending of library books, bazaars, meetings and organized social events could probably occur in the lounge. The former gymnasium of Martin Grove Gardens was considered sufficiently large to accommodate these activities and retention of the stage in the design of the lounge was appreciated.

There was criticism that having the laundry room located directly adjacent to the lounge would be too noisy. Instead, it was suggested that it be moved into one of the rooms designated as an apartment unit.

The Lobby

The lobby of a senior citizen building is the ideal place for observing daily activities in the building and meeting fellow residents at almost any time of the day. It is therefore not surprising that participants in the discussion group were critical that a large lobby is absent from the Martin Grove Gardens design. Clearly the small entranceway in this design could not appropriately serve as a waiting area or an informal meeting place for casual conversation. It was suggested that the lounge wall opposite the main entrance be of glass so that it would be possible to sit in the lounge and look out through a slightly expanded front corridor and entranceway. With this arrangement, the location of the mailboxes in the lounge was considered ideal and no units would be sacrificed.

Parking

The 31 spaces at the school would allow for almost one space per apartment unit. Roughly one third of the participants in the discussion session own their own cars and consequently this number of spaces was judged adequate for both residents and visitors.

The location of parking a considerable distance from some units was preferred to an alternative arrangement that would put parking close to apartments but require a driveway between the building and the communal open space. The majority of participants said they would not want to sacrifice their view and direct access to the park and apartment grounds. Most lived in high-rise apartment buildings and used shopping carts without major problems. They felt it would not be difficult to carry parcels from cars to apartments in Martin Grove Gardens, since there is an entranceway adjoining the parking lot.

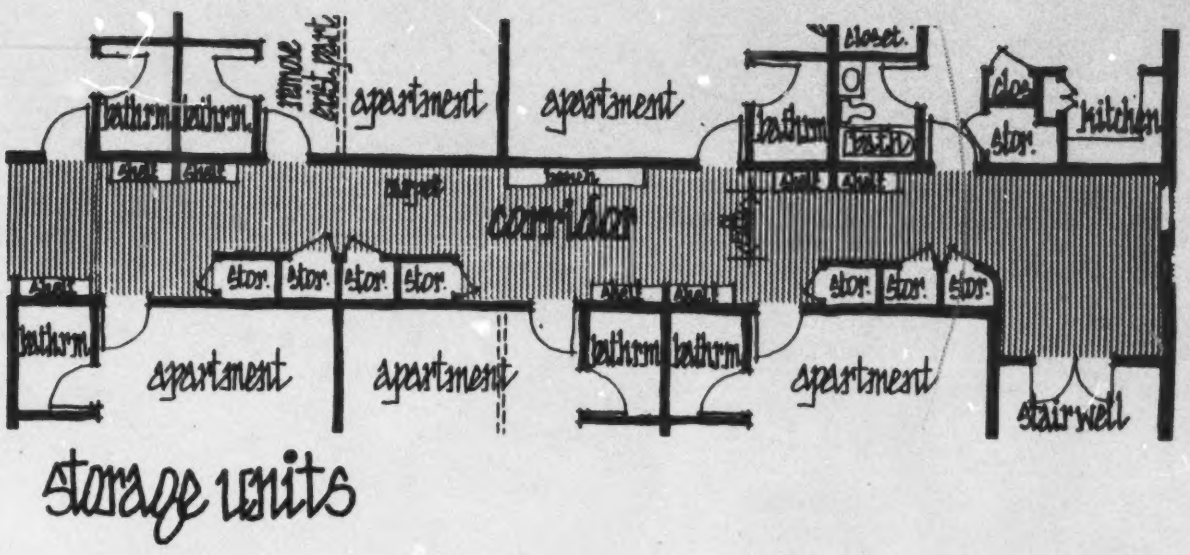
Security

Fire safety and protection from intruders were two pressing concerns. Many participants had experienced difficulties evacuating senior citizen buildings in response to the fire alarm and had problems with unwanted intruders. It was suggested that the traditional intercom and front door locking system in modern apartment buildings be complemented by security guards or a night manager who would be on call throughout the evening.

There was also some concern expressed regarding the absence of alarm systems in the individual units. Participants who are hard of hearing suggested a flashing light in the rooms of sufficient intensity to awaken them in case of fire.

Storage

All participants argued for more storage space in apartments, particularly bachelor units. They were pleased with the idea of storage lockers in the corridors adjacent to units. However, they suggested that lockers would need lighting and should be safe from fire.



The Project Population

In general, participants felt it might be easier to get to know neighbours and make friends in a housing development with 39 suites than in the larger 100 to 300-unit developments they are used to. Their only concern was that some facilities and services could not be provided in a smaller development, for example a variety or grocery store or an active senior citizen club. It was suggested that links could be developed with other senior citizen clubs, but that this might necessitate the purchase of a small van for travelling back and forth.

Management of the Senior Citizen Project

Some participants favored the idea of having a full-time manager or superintendent living in the building. Others suggested the alternative of a night manager on call throughout the evening to handle emergencies or let people who misplace keys into their apartments. This was considered essential to a majority of participants.

Several people suggested the superintendent is often more a problem than a help if the person is over-

worked, unsympathetic or unfriendly. However, participants agreed the superintendent can be a critical factor in making an apartment building a good place to live. Some senior citizens rely on the superintendent in times of emergency and even for help with daily chores such as carrying in groceries. Unfortunately, the participants suggested that helpful and friendly superintendents are extremely rare.

A number of questions were raised that could not be answered at this early stage but that confirmed the importance of management practices to residents' satisfaction. These questions related to the allocation of apartment units, requests for relocation to other buildings, rents, operating policies and regulations.

One concern pertinent to the design for school conversions related to the maintenance of private yards. In order to prevent a deterioration of the overall appearance of the project it was suggested that the housing authority should be responsible for maintenance. A sharing of responsibility among the able residents was not considered practical as there would always be some who would not co-operate.

Establishing the Residential Character of the Building

Corridors

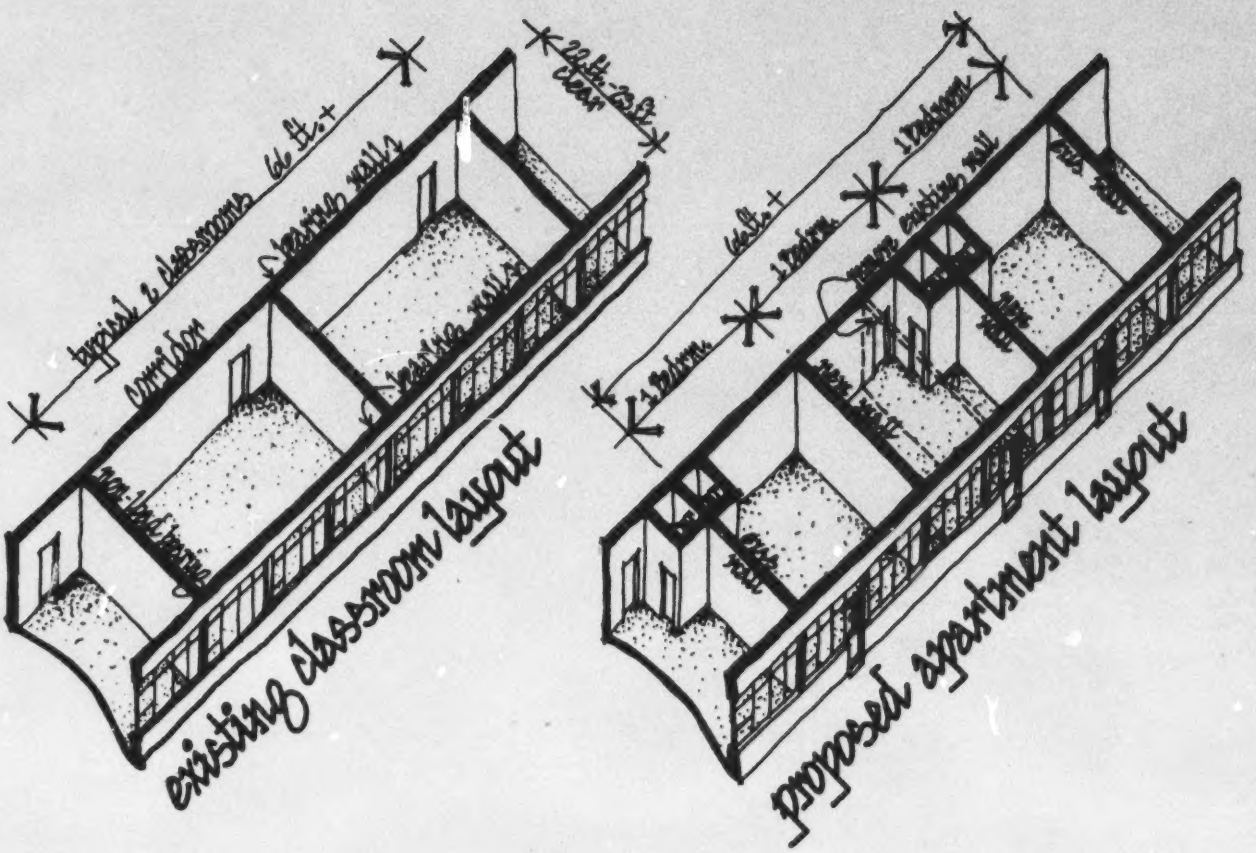
Suggestions for altering the institutional character of wide, stark school corridors were approved with one important exception. There were some serious reservations about carpeting corridors even though it might reduce noise. The experience of participants in some senior citizen buildings was that carpets were poorly maintained and, after some years, became dirty and unattractive. They favored the current school terrazzo corridors because they could be maintained easily and the hard surface is well suited to wheelchairs. There was, however, a persistent minority that insisted on carpeting to minimize noise. Eventually, those advocating carpet suggested a compromise: Carpeting down one side for walking on and the remainder of the hall left with a hard surface.

The provision of sitting areas along corridors to help alleviate their institutional character was supported.

In fact, benches already in corridors of Martin Grove Gardens attracted small conversational groupings during a coffee break the day of the discussion session.

The Units

A number of the features of classrooms were considered worth keeping in the new apartment units. It was suggested the large windows should be retained at all costs. The windows are excellent for viewing the outdoors and for providing natural light and ventilation. Some people suggested that having windows on only one side of the unit might not allow for proper cross-ventilation in the summer. Therefore, it was suggested that a transom window might be included above the door or that space be left for an air conditioner. Participants living in buildings with unit air conditioners said they pose no noise problems.



There was no agreement on the desirability of high ceilings in classrooms. Some people felt they might create a more spacious atmosphere, particularly in smaller bachelor units. Others preferred the standard lower ceiling. However, all participants agreed the institutional fluorescent lighting should be removed.

Design Trade-Offs

A trade-off game was used to arrive at a better understanding of the priority the participants assign to the major design components.

Those features they were asked to rank for importance were:

1. One-bedroom apartments (versus bachelor units)
2. A lounge and recreation room
3. Apartment with ground level exits
4. A private yard
5. An outdoor patio with recreational facilities
6. Garden plots

A score of six was assigned to a feature ranked first, five points to the one ranked second and so on to one point for the sixth choice. Point scores were

totalled and the following rankings and scores resulted:

Ranked Design Components	Point Score
One-Bedroom Apartments	216
Lounge/Recreation Room	183
Ground Floor Apartment With Exterior Exit	177
Private Yard	149
Outdoor Patio/Recreation Facilities	128
Garden Plots	70

The overriding importance to participants of the one-bedroom apartment shown by the trade-off exercise reinforces the earlier discussion of the desirability of one-bedroom suites.

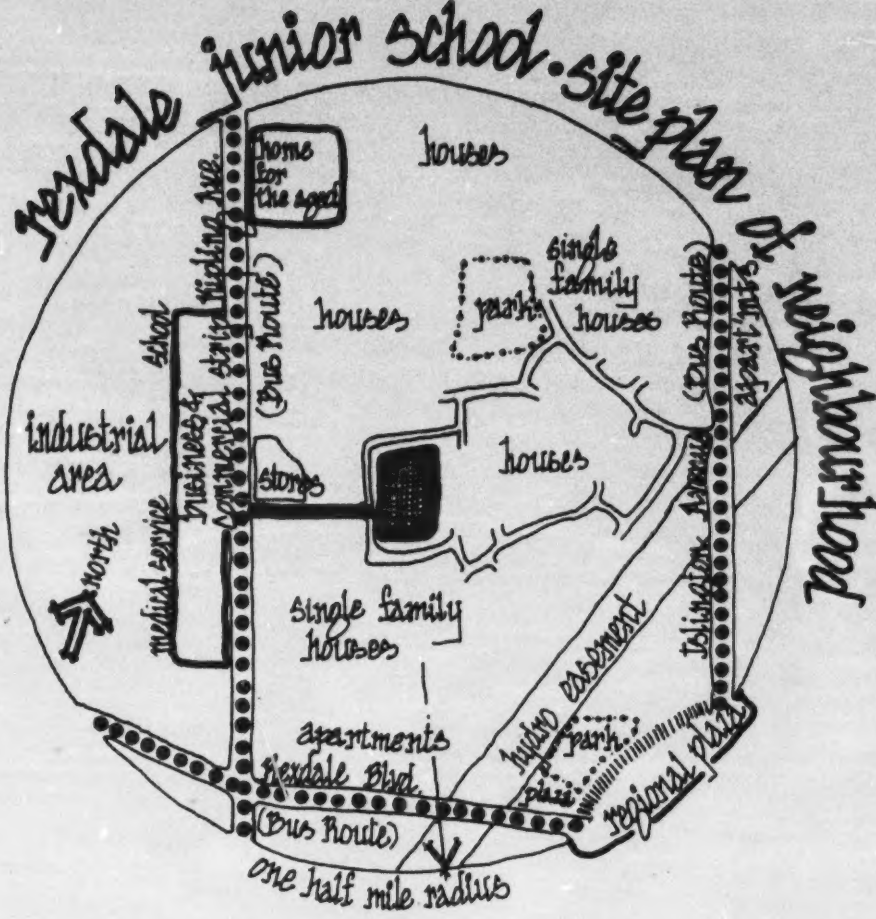
The ranking of the lounge and recreation room demonstrates the importance of social and recreational facilities in even the smallest senior citizen building. The importance attached to ground-floor apartments with exterior exits undoubtedly results from the desire for an emergency exit. Private yards and outdoor facilities were considered less important because the Canadian climate restricts their use to a few months of the year. Nonetheless, given their role as a focal point for social interaction during the summer months, we should not underestimate their desirability. Finally, it is not surprising that garden plots are the least important design component. Even the avid gardeners in the group viewed them as a luxury rather than an essential component of senior citizen housing.

Community Services and Facilities

The importance of being close to community services and facilities was immediately apparent. The issue was raised as soon as the bus bringing participants to the discussion left a major arterial road to enter the largely residential area were the school is located.

Anything more than a quarter mile walk to a bus stop was considered excessive, particularly in cold weather. In addition, participants wanted frequently-used services and facilities immediately accessible to their housing. This is understandable, given that most elderly persons do not own their own cars and often have difficulty walking any distance with parcels or groceries.

In a ranking exercise, participants were asked to say how far from home it would be acceptable to travel to find 14 commonly used services and facilities. To simplify the exercise, three locations were suggested – a five-minute walk from home, a 15-minute walk or a distance requiring them to take public transportation. A constraint was also introduced into the exercise to ensure responses were realistic and that all services and facilities were not located within five minutes of home. A limit was set of five facilities within five minutes of home and another five within a 15-minute walk.



An accessibility score was achieved by assigning three points to a facility located within a five-minute walk, two points to locations within a 15-minute walk and one point to the other locations. Therefore, those services participants wanted closest to home have the highest point score in the following list:

Service or Facility	Accessibility Scored	Location Most Often Specified
Grocery Store	142	Within a 5-minute walk
Drug Store	126	
Bank	121	
Doctor's Office	119	
Church	90	Within a 15-minute walk
Beauty Shop or Barber	86	
Library	84	
Post Office	84	
Senior Citizen Club	82	
Restaurant	79	
Variety or Smoke Shop	77	
Clothing Store	59	Accessible by public transit
Liquor/Beer Store	56	
Movie Theatre	46	

Essential, frequently-used services were wanted nearby for obvious reasons, with non-essential or less-frequently-used services at a greater distance.

Participants were also given an opportunity to add other services or facilities to the list if they were considered important. A number of respondents wanted a bus stop within a five-minute walk. The only other facility suggested was a hospital within walking distance for elderly persons requiring regular therapy.

The importance attached to the availability of community services and facilities cannot be stressed too strongly. In the view of participants, schools should not be converted to senior citizen housing if they are isolated in residential areas and separated from what they perceive to be essential services. This issue was beyond the terms of reference of the feasibility study, but proximity to services and facilities must be carefully examined before selecting schools for conversion.

Mechanical Requirements

Mechanical Consultant – Mr. J. Rose

The plumbing, heating and air ventilation systems of the three schools were examined to determine what would have to be retained, adapted or replaced to economically meet the needs of senior citizen housing.

Since the mechanical systems of the schools have been well maintained, it is reasonable to expect many more years of useful life from the main components.

Care was taken to demonstrate how mechanical systems can be sufficiently updated to serve the extended life expectancy of the buildings. All the codes and regulations applying to the new function for the buildings were taken into account. Thought was also given to ways of making the most efficient use of energy for heating, ventilation and cooling.

It was concluded that cooling equipment could not be included and have costs remain competitive with other senior citizen housing. An electrical outlet is being provided to allow tenants to install their own window-type air conditioning unit if desired.

Following are detailed descriptions of each building's mechanical system and recommendations for alterations. An estimate of the cost of the work is incorporated in the figures presented in the cost analysis section.

Martin Grove Gardens Junior School

The hot water heating system at Martin Grove Gardens utilizes a single gas-fired firebox boiler. Three pumps mounted on the floor by the boiler circulate heated water through a two-pipe, direct-return system above corridor ceilings. The main pipes are connected to continuous finned pipes for heating in classrooms and the general purpose room.

A fan coil unit with connecting ductwork is used to heat the library. Each classroom and the general purpose room are equipped with automatic temperature controls using a wall-mounted thermostat to operate control valves.

A mechanical exhaust system is provided in classrooms, corridors, the general purpose room and change areas. A separate system serves washrooms. Main ductwork above corridor ceilings is connected to utility fans installed in fan rooms. There is no ventilation system to supply fresh air.

Boys' and girls' washrooms plus small washrooms for male and female staff are located centrally in the original section of the building. There are also two water closets and a lavatory in the health room and a sink in the kitchen. The south wing, added in 1963, four years after the original section was built, has large boys' and girls' washrooms at the south end. All classrooms have sinks.

Domestic hot water is supplied only to the kitchen, health room lavatory, staff washrooms and the janitors' slop sinks. All other fixtures have only cold water.

Sanitary drains are buried beneath the corridor floors and cover all areas of the building except a section approximately 50 feet long adjacent to the east end of the general purpose room. The sanitary drain connects to a sanitary sewer in the street. The storm drainage system for the roof includes standard roof hoppers, inside rain water leaders and buried storm drains located generally under the corridors and

extending out to connect with a storm sewer in the street.

Since the mechanical system has been well-maintained, it remains in good condition and could be re-used with modifications and additions. For example, the hot water boiler may be re-used but a second stand-by boiler should be installed to provide for the chance of a system breakdown.

The exhaust ventilation system could be modified to serve apartment bathrooms and kitchens. It was found, however, that it would be less expensive initially to install new individual kitchen and bath-room exaust fans with ducts running over each suite to outlets on the outside wall.

The four-inch domestic water service supplying the building is large enough for the new requirements. However, certain portions of the domestic cold water distribution piping are undersized and would have to be replaced. An entirely new and enlarged piping system is required for hot water, along with new gas-fired domestic water heaters. The main sanitary drains can be re-used with new connections from each suite. A new section of buried drains will be required to serve three suites in the east end of the original wing. The roof drainage system can be re-used. The build-ing's fire hose cabinets and stand-pipe system would have to be revamped to suit the new requirements.

Providing apartments with doors to the outside will interrupt the existing finned pipe radiation system. The finned piping elements can be adapted for re-use but it will be cheaper to obtain new enclosures than to cut existing ones to suit new room sizes. Re-piping of the radiation system is also required to permit installation of individual room temperature control valves.

Regulations of Ontario's Ministry of Housing require that corridors in senior citizen housing be supplied with tempered fresh air. This will necessitate a new duct system to carry the air and a new gas-fired heating unit capable of heating outside air to room temperature. It is also required that the make-up air heating units be located inside the building rather than on the roof.

In addition to the modifications and additions already discussed, existing plumbing fixtures would obviously have to be removed. New plumbing fixtures would be installed and connected in each suite. A lavatory and water closet would be provided in two public washrooms and a sink in the kitchen adjacent to the crafts and recreation area. Finally, provision would be made for a laundry tub and the appropriate number of washers and dryers in the new laundry area.

Rexdale Junior School

The hot water heating system at Rexdale utilizes two gas-fired firebox boilers that were coal-fired before being converted in 1971. Four pumps mounted on the floor by the boilers circulate heated water through a two-pipe system above corridor ceilings. The main pipes are connected to continuous finned pipes which provide heat along the outside wall of each classroom. Room temperature is individually controlled by wall-mounted thermostats connected to pneumatic control valves in the radiators. A unit ventilator is used to heat the library and two projection unit heaters are used in the general purpose room.

A mechanical exhaust system provides air ventilation in classrooms, the general purpose room and wash-rooms. Main ductwork is located above corridor ceil-ings and connects to exhaust fans in storage rooms.

Separate systems serve the washrooms, general purpose room and kindergarten. There is no system to supply tempered fresh air.

There are central washrooms at the north end of the original school and boys' and girls' washrooms on the first and second floors as well as in the east addition. There are men's and women's washrooms, plus kindergarten washrooms. Sinks are installed at the rear of each classroom. Sanitary drains run under corridors and hot and cold domestic water pipes are above corridor ceilings. The building has a fire standpipe and fire hose cabinets. The domestic hot water supply is too small for the new building use.

The heating system is in good condition and could be adapted for use in the renovated building. Finned piping can be removed and cut to suit new room sizes, but the enclosures will have to be replaced. Each suite will require a new room thermostat and control valve. The existing boiler system has ample capacity to provide heat to serve the tempered fresh air supply system required for corridors. This modification was found to be cheaper than adding two roof top units and also meets the Ontario Housing Ministry's requirement that heating units be inside the building. New ductwork will have to be installed above corridor ceilings to deliver the tempered fresh air.

Each kitchen and bathroom would have to be supplied with new individual exhaust fans and ducts leading directly to the outside of the building.

The domestic cold water service to the building is adequate, as are the main water pipes in corridor ceilings. Some sections of the main domestic hot water pipes will have to be enlarged, and new gas-fired water heaters installed.

A new hot water recirculation line is required. One section of the main sanitary drain about 100 feet long will have to be replaced with a larger size under the north-south corridor. A new buried sanitary drain will also be required for suites 15 and 16.

Existing plumbing fixtures will have to be removed and the new suites fully equipped and connected. Laundry facilities would also be provided.

Royal York Collegiate Institute

Royal York's heating system uses low pressure steam generated by two gas-fired firebox boilers. Steam supply piping and condensate return piping are installed in crawl trenches under the building's perimeter. A condensate tank and pump in the boiler room returns condensate to the boilers. There are individual convector radiators in many classrooms and continuous finned piping in newer additions to the building. Individual room temperature controls are provided throughout.

A ventilation system supplies air to the auditorium, gymnasia, woodworking shop and metal working shop. The library and offices are air conditioned. A mechanical system for collecting exhaust air serves classrooms and washrooms. There is no fresh-air supply system.

The plumbing system includes a number of washrooms, shower rooms, chemistry and science laboratories and a large kitchen, all typical of secondary schools of this size. Roof drainage is by standard roof hoppers and rain water leaders connected to a buried storm drain system. The building is equipped with a fire standpipe system and fire hose cabinets. Domestic hot water is obtained from a large central

hot water storage tank located in the boiler room. A heat exchanger in the tank is supplied with steam from the boilers of the space heating system.

Sanitary drains connect to a sanitary sewer in the street.

Boilers can be re-used, though leaks or corrosion problems may arise in the future and require replacement of condensate return pipes. It was decided that, because of extensive changes to the interior design of the building, cost estimates would be based on replacement of the entire perimeter radiation system, piping connections and temperature control valves.

New tempered air supply systems are to be provided to corridors. New mechanical exhaust air systems are also to be included for suite bathrooms and kitchens, group washrooms, and shower areas. The new woodworking shop would also have a general exhaust system.

The existing air conditioning unit that now serves the library and some adjoining rooms could be reused to cool the lounge, recreation area, administration offices, crafts and games rooms, woodworking shop, beauty salon, tuck shop and barber shop. Ductwork would have to be modified.

New air conditioning units could be installed on the roof to cool the cafeteria/recreation area.

The domestic hot and cold water piping system would have to be enlarged and extended to serve the new plumbing fixtures in apartments and group washrooms. It will also be necessary to extend the sanitary drains to serve apartments in the north and south wings. Old plumbing fixtures would be removed and the new fixtures installed and connected. New laundry facilities would be installed.

Electrical Requirements

Electrical Consultant – Mr. B. Rubin

Extensive alterations to electrical systems would be required to adapt the three schools for senior citizen accommodation. Only in Royal York Collegiate is the electrical service adequate to meet the demand that will result from electrically-operated kitchen equipment and possibly air conditioners in units. Fluorescent lighting fixtures would have to be replaced by incandescent lighting in most areas of the buildings, except perhaps in offices, service rooms and laundries. Existing public address and intercom systems, as well as the program clock systems would be removed and replaced by an apartment-type intercom and door release system. Telephone service would have to be provided to each apartment unit. Emergency lighting, with either individual batteries or a central diesel engine generator for stand-by power, would be required in all public areas not already equipped. Exit lights and a new or upgraded fire alarm system for the public areas would also require a stand-by power source.

The electrical service requirements of apartment units are set out in the Ontario Housing Corporation's modified tender documents for one and two-storey senior citizen housing, revision 10 of February 1976. Outlets are required for an electric range, refrigerator, counter top appliances, a through-wall air conditioning unit, telephone and cable television. Also required are residential-type lighting fixtures, an intercom and door release wall station in the apartment foyer, and a smoke dector with warning signal. Each apartment unit would have its own electrical panel with a 60 ampere service from the main building supply. Individual meters would not be provided.

Outside the buildings, lighting poles would be placed along driveways and walkways for reasons of safety and aesthetics, and to encourage use of the site in evenings.

No provision will be required for electric space or water heating.

Both Martin Grove Gardens and Rexdale are equipped with 400 ampere electrical services at 120/208 volts that would have to be enlarged to 600 amperes. While the Etobicoke Hydro transformers serving Rexdale are adequate, three 50 KVA single phase transformers are not available at Martin Grove Gardens and would be needed. Lighting and power distribution in the two buildings is at 120/208 volts, three phase, four wire, though some lighting panels at Martin Grove Gardens are 120/240 volts single phase, fed from two phases of the service.

At Royal York, the electrical service is 1,600 amperes at 120/280 volts with lighting and power distribution being three phase, four wire. Some lighting panels are 120/240 volts single phase, fed from two phases of the service.

The service is supplied from three 200 KVA single phase transformers owned by Etobicoke Hydro and located in a transformer vault adjacent to the electrical room.

At Royal York a simple system of communication would probably be required between staff areas, combined with a public address system throughout the common areas.

The electrical rooms at Royal York and Martin Grove Gardens would probably have to be enlarged to accommodate new electrical distribution systems.

In all schools, the existing lighting panels serving classrooms would be removed and replaced with panels in service areas of adequate capacity for the lighting and power requirements of common areas.

Consideration could be given, when replacing fluorescent lighting throughout the buildings, to using new wall-mounted fixtures in order to facilitate the changing of bulbs.

A detailed inventory of all the necessary changes to the schools' electrical systems was considered in the preparation of cost estimates outlined in the cost-analysis section of the report.

Structural Requirements

Structural Consultant – Mr. E. Gosling

It was found that the buildings would require little structural alteration, provided all new partitions on upper floors are made of metal stud and plastered or covered with dry-wall. Partitions on lower floors could be of lightweight concrete block or the same as partitions on upper floors.

Following is a detailed discussion of each of the schools studied.

Rexdale Junior School

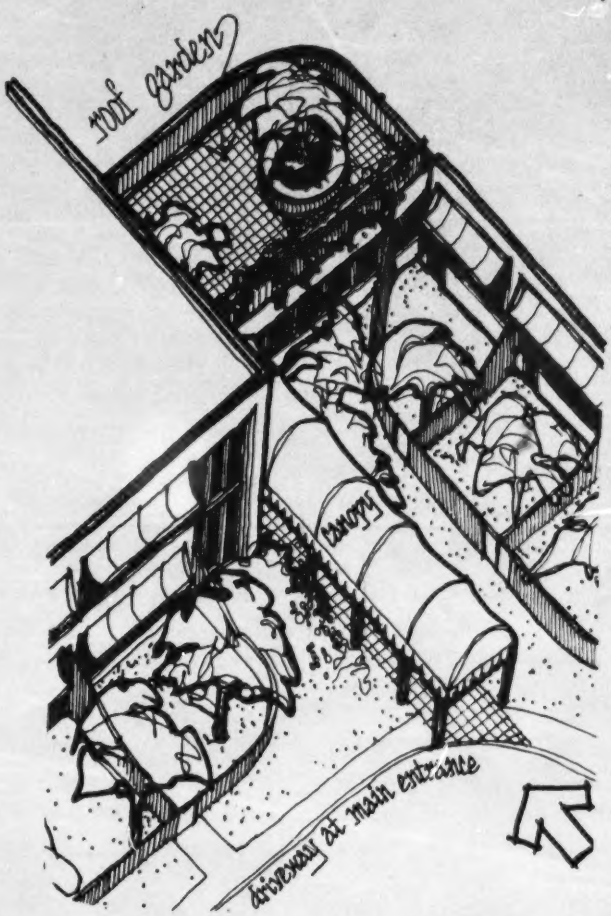
The original portion of Rexdale, built in 1954, includes a two-storey classroom wing and a single-storey general purpose room, office and entrance area. An extension to the rear of the building, built in 1955, is a single-storey classroom wing with a roof designed to support a second-floor classroom area. This wing was extended further in 1960 and a single-storey kindergarten area was added at the front of the original building.

The construction throughout consists of load-bearing masonry corridor walls and exterior walls framed with steel spandrel beams supported on steel columns.

The upper floor and the roof designed to support a second floor are constructed of 2.5-inch concrete slab on open-web steel joists. Elsewhere, tongue-and-groove wood is used in the roof instead of concrete slab.

Roof areas were designed to support a snow load of 40 pounds per square foot, 60 pounds in the two-storey section and the planned two-storey addition.

The proposals for conversion of the building to residential accommodation were prepared so that no major revisions to the basic structure would be required. However, the floor system was not designed to accommodate partitions at any location other than shown on original drawings. For that reason, any new partition must be as light as possible in second floor areas. Classroom areas were originally designed for a live load of 60 pounds per square foot. Residential areas need only be designed for a live load of 40



pounds per square foot so there is an allowance of 20 pounds per square foot to accommodate partitions. But this allowance can only generally accommodate partitions of steel stud covered with drywall or plaster.

The architect's plans originally called for a roof top garden close to the south end of the second floor to serve apartments on this floor. Major strengthening of the building and changes to the roof membrane would be required to support substantial planters or flower beds, benches, a fixed railing and a new concrete or patio walking surface. This would add substantially to the cost of conversion. An outdoor summer seating area could be provided, however, if use were made of lightweight, removeable handrailing, benches and duckboards that would be stored elsewhere during the winter.

Martin Grove Gardens Junior School

The original section of Martin Grove Gardens, built in 1959, and the 1963 addition to the south wing both have load-bearing masonry corridor walls and exterior walls framed with precast concrete beams and columns. Precast concrete slabs are used for the roof of the single-storey building.

In the plan for conversion of the school the interior structural walls remain more or less untouched. The conversion could be carried out with little or no alteration to the basic structure. The only changes of any significance would be the cutting of new interior door openings and, in a few instances, new window and door openings through exterior masonry walls.

Royal York Collegiate Institute

Royal York, which was built in four stages between 1951 and 1971, has a structural steel framing throughout, with very few load-bearing masonry walls. The tongue-and-groove wood deck roof and the 2.5-inch concrete slab upper floor framing are both supported on open web steel joists or beams, which are supported in turn on steel columns. The main floors are general concrete slabs resting on the ground.

The removal of or relocation of walls will pose no significant problem, except in the 1960 single-storey classroom addition, where plans call for removal and relocation of portions of the north, load-bearing wall. It will be necessary to temporarily shore the present roof during the installation of the new steel beams required to support this roof.

As in the other schools, no major structural problems will result if lightweight materials are used in partitions. The allowance noted earlier of 20 pounds per square foot for partitions on the second floor can actually be exceeded in some areas of Royal York. In some instances, areas that are now corridor will become part of residential space. In these locations partition loading of 35 pounds per square foot can be tolerated, since the corridors were designed for a greater live load than classrooms.

The addition of a new stairwell and new elevator shaft at the north end of the 1955 classroom wing addition presents no major structural problems.

Cost Analysis

Quantity Surveyor – Mr. J. Rae

On the basis of design input from the consultants, the following costs have been developed. They are based on 1978 market conditions.

MARTIN GROVE GARDENS JUNIOR SCHOOL lends itself to conversion to senior citizens apartments. However, the underground drainage system is inadequate and would require replacement at considerable expense.

As the existing roof structure in this school is precast concrete, no suspended ceilings are required in the apartments. However, if energy conservation is to be considered, then a suspended ceiling will be required to support batt insulation.

Estimated costs of the Martin Grove renovation are:

ARCHITECTURAL WORK

• Take down and remove suspended ceiling and bulkheads	$ 3,200
• Take down and remove interior partitions as required	3,000
• Remove existing doors and frames	400
• Remove existing counters, cupboards and fittings throughout	3,500
• Remove existing venetian blinds	300
• Block up existing door and window openings	2,800
• Cut openings in existing brick and block walls for new doors and windows, insert lintels and make good jambs	9,800
• Cut openings in existing exterior walls for new patio doors, including modifying windows	$ 8,200
• Break up and remove existing concrete and terrazzo flooring for new drainage system	6,200
• Hand excavation for drains and water lines	2,400
• Backfill and compact	1,600
• Make good concrete flooring	3,100
• New masonry partitions	15,500
• Steel stud partitions drywall both sides	25,700
• Drywall laminated to masonry walls	16,500
• Suspended acoustic tile ceilings	6,800
• 1 3/4" Entrance doors to suites including hollow metal frames	5,000
• 1 3/8" Doors including hollow metal frames	8,400
• Sliding doors to closets	2,400
• 1 3/4" Solid core doors to patios	6,500
• Combination storm and screen doors	4,100
• New aluminum sash	6,900
• Remove existing washroom fixtures, toilet partitions, etc. and make good	1,500
• 4" Rubber base	3,000
• Hat shelf with coat rod to suites	800

• Storage shelving	$ 4,000
• Kitchen counters	12,100
• Pantry shelf	1,000
• Upper cupboards in lounge kitchen	400
• Shelves in corridors	500
• Benches in corridors	1,600
• Carpet to suites	15,800
• Carpet to corridors	6,000
• .080 gauge vinyl asbestos tile to floors	2,600
• Ceramic tile to walls	6,300
• Paint to walls and ceilings	12,500
• Paint doors and frames	2,000
• Paint shelving	800
• Exterior painting	6,000
• Finish hardware	5,000
• Rough carpentry	1,800
• Miscellaneous metals	1,200
• Mail boxes	800
• Washroom accessories including mirrors, grab bars and medicine cabinets	4,200
• Garbage compactor and storage bin	3,000
• Make good existing roofing	4,000
Total Architectural Work to Summary	$ 239,200

HEATING AND VENTILATION

• Sanitary and room exhaust	$ 12,100
• Grilles and diffusers	1,000
• Make up air system units	8,000
• Hot water heating system	8,000
• Balancing	1,500
• Automatic Temperature controls	10,800
• Modify hot water heating cabinets	6,900
• Demolition	700
• New boiler (may be required)	6,000
• Provincial sales tax	2,900
• Heating and Ventilation contractor's indirect costs, overhead and profit *(variable, dependent on market conditions)*	7,100
Total Heating and Ventilation to Summary	$ 65,000

PLUMBING

• Buried drainage	$ 23,700
• Modify rain water leaders	500
• Fire hose cabinet	600
• Plumbing fixtures	32,900
• Domestic water piping	17,000
• Gas supply	5,500

• Domestic water heater and tank	$ 3,300
• Demolition	500
• Provincial sales tax	4,000
• Plumbing contractor's indirect costs, overhead and profit *(variable, depending on market conditions)*	15,000
Total Plumbing to Summary	$ 103,000

ELECTRICAL

• Service	$ 60
• Low voltage switchgear	2,640
• Motor wiring	1,460
• Secondary feeders	2,220
• Panels	3,030
• Fixtures and wiring	2,130
• Branch wiring	1,230
• Fire alarm	2,410
• Telephone	490
• T. V. system	860
• Exterior lighting	5,000
• Emergency lighting	920
• Door intercom	760
• Typical suites	36,460
• Provincial sales tax	2,170
• Electrical contractor's overhead and profit *(variable, dependent on market conditions)*	3,160
Total Electrical Work to Summary	$ 65,000

EXTERIOR WORK

• Break up and remove existing asphalt paving and base	$ 2,000
• Remove existing fencing, basketball posts, etc.	400
• Imported top soil	3,000
• Roto-till existing sodded areas, shape and level	500
• Seeding	1,200
• New asphalt paving and walkways	9,000
• Line marking new and existing paving	300
• Wood fencing	2,000
• Precast paving	3,600
• Exterior storage and sun porch	3,000
• Landscaping	9,000
• Awnings	21,000
• Roof garden	5,000
Total Exterior Work to Summary	$ 60,000

INDIRECT COSTS

• Project sign	$ 200
• Telephone	450
• Stationery and office supplies	200
• Photographs	200
• Fire protection	500
• First aid kit	150
• Temporary light power and water	2,000
• Cleanup during construction and at completion	6,500
• Field supervision	16,000
• Insurance	1,100
• Performance bonds	2,500
• Building Permit	3,200
• Equipment and small tools	3,000
• Winter costs	3,000
• Inspection testing and samples	1,000
• General contractor's head office overhead and profit *(variable, dependent on market conditions)*	25,000
Total Indirect Costs to Summary	$ 65,000

CONTINGENCIES

• Design contingency	$ 35,000
• Post contract contingency	15,000
Total Contingencies to Summary	$ 50,000

SUMMARY

• Architectural Work	$ 239,200
• Heating and Ventilation	65,000
• Plumbing	103,000
• Electrical	65,000
• Exterior Work	60,000
• Indirect Costs	65,000
• Contingencies	50,000
Total	$ 647,200

ADDITIONAL COSTS RELATED TO ENERGY CONSERVATION

• Storm windows and screens	$ 14,800
• Suspended drywall ceiling	21,700
• 3" Batts above suspended ceilings	8,200
• Drywall bulkhead at windows	3,600
• Omit steel stud partition	(-7,000)
• Omit drywall laminated to block walls	(-3,500)
Total Additional Cost	$ 37,800

REXDALE JUNIOR SCHOOL also lends itself admirably to conversion to senior citizens apartments. However, the underground drainage system presents the same problem as Martin Grove Gardens.

Estimated costs of the Rexdale renovation are:

ARCHITECTURAL WORK

- Take down and remove suspended ceilings throughout $ 9,500
- Take down and remove interior partitions as required 4,600
- Remove existing doors and frames 500
- Remove existing counters, cupboards, fitments and stage 4,000
- Remove existing venetian blinds 300
- Block up existing door openings 4,000
- Cut openings in existing block partitions for new doors, insert lintels and make good door jambs 6,300
- Cut openings in existing exterior walls for new patio doors, including modifying windows 6,500
- Break up and remove existing concrete and terrazzo flooring for new drainage system 6,600
- Hand excavation for drains and water lines 3,000
- Backfill and compact 2,000
- Make good concrete flooring 2,300
- Cut openings, install new sash and modify existing sash in rooms 17 to 20. Provide opening sash where none exists 5,000
- Block walls between suites 12,800
- Steel stud partitions, drywall both sides 24,000
- Steel stud partitions, drywall one side $ 500
- Drywall fixed to and including strapping 3,300
- Drywall laminated to block walls 11,300
- Suspended drywall ceilings 31,000
- Fire rated suspended acoustic tile ceilings 4,800
- Drywall bulkhead at windows 5,800
- 1 3/4" Entrance doors to suites including hollow metal frames 6,800
- 1 3/8" Doors including hollow metal frames 8,600
- Sliding doors to closets 2,600
- 1 3/4" Solid core doors to patios 5,200
- Combination storm and screen doors 3,300
- Exterior glazed screen and doors to match existing 1,800
- Interior vestibule screen and doors to match existing 1,800
- Remove existing washroom fixtures and made good, including minor modification to small washroom next laundry 1,500
- 4" Rubber base 3,700
- Hat shelf with coat rod to suites 1,300
- Storage shelving 5,300
- Kitchen counters 14,800
- Pantry shelf 1,100

• Upper cupboard in lounge kitchen	$ 350
• Handrails at ramps	200
• Shelves in corridors	700
• Benches in corridors	3,400
• Carpet to suites	15,500
• Carpet to lounge	600
• Carpet to corridors	5,400
• .080 gauge vinyl asbestos tile to floors	3,100
• Ceramic tile to walls	8,000
• Paint to walls and ceilings	14,000
• Paint doors and frames	2,300
• Paint glazed screens	100
• Paint shelving	900
• Exterior painting	3,000
• Finish hardware	6,000
• Rough carpentry	2,000
• Miscellaneous metals	1,500
• Mail boxes	1,000
• Washroom accessories, including grab bars, mirrors, and medicine cabinets	5,200
• Garbage compactor and storage bin	3,000
• Make good existing roofing	3,000
Total Architectural Work to Summary	$ 285,150

HEATING AND VENTILATION

• Sanitary and room exhaust	$ 14,700
• Grilles and diffusers.	2,200
• Make up air system units	6,300
• Exhaust fans	900
• Hot water heating system	8,700
• Balancing	1,600
• Automatic temperature controls	9,200
• Modify hot water heating cabinets	4,600
• Provincial sales tax	800
• Heating and ventilating contractor's indirect costs, overhead and profit *(variable, dependent on market conditions)*	9,000
Total Heating and Ventilation to Summary	$ 58,000

PLUMBING

• Buried drainage	$ 41,000
• Modify rain water leaders	400
• Fire hose cabinet	600
• Plumbing fixtures	39,000
• Domestic water piping	18,000
• Domestic water heater and tank	3,200
• Provincial sales tax	1,500
• Plumbing contractor's indirect costs, overhead and profit *(variable, dependent on market conditions)*	15,000
Total Plumbing to Summary	$ 118,700

ELECTRICAL

• Service	$ 100
• Low voltage switchgear	2,300
• Motor wiring	1,400
• Secondary feeders	2,100
• Panels	2,700
• Wiring fixtures	3,100
• Branch wiring	1,300
• Fire alarm	2,500
• Telephone	500
• T. V. system	1,100
• Exterior lighting	6,300
• Emergency lighting	1,500
• Door intercom	700
• Typical suites	45,000
• Demolition	2,000
• Provincial sales tax	2,600
• Electrical contractor's overhead and profit *(variable, dependent on market conditions)*	5,000
Total Electrical to Summary	$ 80,200

EXTERIOR WORK

• Break up and remove existing asphalt paving and base	$ 2,000
• Remove existing fencing, basketball posts, etc.	400
• Imported top soil	$ 3,000
• Roto-till existing sodded areas, shape and level	500
• Seeding	1,200
• New asphalt paving and walkways	9,000
• Line marking new and existing paving	300
• Wood fencing	2,000
• Precast paving	3,600
• Exterior storage and sun porch	3,000
• Landscaping	9,000
• Awnings	21,000
• Roof garden	5,000
Total Exterior Work to Summary	$ 60,000

INDIRECT COSTS

Project sign	$ 200
Telephone	500
Stationery and office supplies	200
Photographs	250
Shoring	100
Fire protection	500
First aid kit	150
Temporary light, power and water	2,000
Cleanup during construction and at completion	7,000
Field supervision	16,000

Insurance	$ 1,200
Performance bond	3,000
Building permit	4,000
Equipment and small tools	3,000
Winter costs	3,000
Inspection, testing and samples	1,000
General Contractor's head office overhead and profit *(variable, dependent on market conditions)*	30,000
Total Indirect Costs to Summary	$ 72,100

CONTINGENCIES

• Design contingency	$ 35,000
• Post contract contingency	15,000
Total Contingencies to Summary	$ 50,000

SUMMARY

• Architectural Work	$ 285,150
• Heating and Ventilation	58,000
• Plumbing	118,700
• Electrical	80,200
• Exterior Work	$ 60,000
• Indirect Costs	72,100
• Contingencies	50,000
Total	$ 724,150

ADDITIONAL COSTS RELATED TO ENERGY CONSERVATION

• Storm windows and screens	$ 19,200
• Insulated metal window panels	14,400
• 3" Batts above suspended ceilings	9,900
• Omit drywall bulkhead at windows	(5,800)
Total Additional Cost	$ 37,700

Summary of Cost Comparison

	Martin Grove No. of Units - 39 Gross Area– 32,137 sq.ft.	Rexdale No. of Units – 49 Gross Area- 36,370 sq.ft.
Cost per square foot excluding energy conservation	$ 20.14	$ 19.91
Cost per square foot including energy conservation	21.31	20.95
Cost per apartment unit excluding energy conservation	16,595.00	14,779.00
Cost per apartment unit including energy conservation	17,564.00	15,548.00
Average construction cost of comparable units in new buildings in Metro Toronto, excluding professional fees	18,000.00	18,000.00

ROYAL YORK COLLEGIATE INSTITUTE, due to its size and extensive facilities, provides a number of options for its conversion. The most viable solution appears to be a combination of senior citizens apartments and a home for the aged. Unlike the other schools which were fully utilized, certain areas such as the gymnasia and auditorium, including circulation space, change rooms, etc., were omitted from the cost study as it was felt that those facilities could be better utilized by citizen groups or others.

All existing interior partitions and ceilings were figured to be completely demolished and removed other than those areas designated to be outside this study.

The structural steel framing in this school will have to be fireproofed to conform to present day building codes. The exterior columns present a major problem and, in order to fireproof these, all existing sash would have to be removed. The solution adopted was to fireproof the columns and block up 50% of the existing glazed area with facebrick, block backup, insulation, strapping and drywall. New double glazed residential aluminum sash and insulated panels would be installed in the balance of the area.

Estimated costs of the Royal York renovation are as follows:

ARCHITECTURAL WORK

• Take down and remove suspended ceilings throughout	$ 45,000
• Take down and remove interior partitions and doors throughout	60,000
• Take down and remove all fittings, fixtures and millwork	15,000
• Break up and remove existing concrete and terrazzo floors for new drains and water lines	$ 7,000
• Hand excavation for drains and water lines	4,500
• Backfill with excavated material	3,000
• Make good concrete flooring	3,500
• Take out and remove existing exterior sash	20,500
• Structural alterations to accommodate new partition layout including all necessary underpinning	30,000
• Cut openings in existing exterior walls and windows to accommodate new doors	5,000
• Excavate for new footings	1,000
• Granular backfill	500
• Concrete in footings	350
• Formwork to footings	400
• 10" Blocks in foundation walls	700
• Facebrick block backup and insulation to new construction and filling in window openings	67,000
• New slab on grade	700
• New roof structures	5,200
• Elevator pits	1,000
• Roofing and sheet metal including repairs to existing roofing	10,000
• New Stair complete	1,800
• Anodized aluminum double glazed residential type sash	53,000

• Fireproofing interior and exterior columns	$ 98,000
• New Corridor walls	69,000
• Steel studs and drywall above ceiling space	1,500
• Insulated fire rated steel stud and drywall partitions between suites	50,000
• Stud partitions in apartments including storage units	18,000
• Ditto with drywall one side only	1,300
• Drywall fixed to and including steel strapping	5,600
• Drywall laminated to block walls	24,000
• Suspended drywall ceilings	112,500
• 1 3/4" Wood doors with fixed panel above including hollow metal frames	28,000
• 1 3/4" Hollow metal doors and frames	700
• Sliding closet doors	1,200
• Aluminum glazed partitions and screens	92,000
• Aluminum glazed doors	15,000
• Exterior wood doors to patios	3,400
• Combination storm and screen doors	2,100
• Metal toilet partitions	3,300
• Mastic fill to floors where partitions removed	9,000
• 1/8" Vinyl asbestos floor tiles	2,600
• .080 gauge vinyl asbestos floor tiles	$ 2,000
• Ceramic tile to floors	10,000
• Carpet including base	85,000
• Ceramic tile to walls	22,000
• Paint to walls and ceilings	31,000
• Paint doors and frames	2,000
• Paint shelving and other millwork	2,000
• Paint exterior work	9,000
• Elevators	100,000
• Hatshelf and hanging rod to suites	800
• Linen and storage shelving	3,500
• Kitchen counters	12,000
• Pantry shelving	700
• Upper cupboards	1,000
• Nurses stations	4,800
• Laundry chutes	2,800
• Double unit chests with drawers	14,000
• Single unit chests with drawers	3,800
• Combination coat and storage units	16,500
• Miscellaneous millwork in chapel, tuck shop, pub, library, etc	20,000
• Rough carpentry	6,000
• Miscellaneous metals, staff lockers, etc.	8,000
• Building sign	1,000

• Finishing Hardware	$ 15,000
• Privacy curtains and track	1,000
• Mail boxes	600
• Washroom accessories, mirrors and medicine cabinets	8,000
• Door numbers, directional signs, etc.	500
• Garbage compactor and storage bin	6,000
• Hand rails in corridors	5,600
Total Architectural Work to Summary	$1,266,950

HEATING VENTILATION AND AIR CONDITIONING

• Heating and Ventilation	$ 212,000
• Air conditioning to dining room	20,000
Total Heating Ventilation and Air Conditioning to Summary	$ 232,000

PLUMBING

• Plumbing throughout	$ 249,000
• Lavatory basin in each bed ward (optional)	72,800
• Increase fire main to 4" (may be required)	19,200
• Additional fire hose cabinets (may be required)	6,000
Total Plumbing to Summary	$ 347,000

ELECTRICAL

• Electrical work complete	$ 252,000
Total Electrical to Summary	$ 252,000

EXTERIOR WORK

• Exterior work allowance	$ 100,000
Total Exterior Work to Summary	$ 100,000

INDIRECT COSTS

• General contractor's supervision, site costs, bonds, permits, etc.	$ 125,000
• General contractor's Head Office overhead and profit *(variable, dependent on market conditions)*	90,000
Total Indirect Costs to Summary	$ 215,000

CONTINGENCIES

• Design contingency	$ 120,000
• Post contract contingency	50,000
Total Contingencies to Summary	$ 170,000

SUMMARY

• Architectural Work	$1,266,950
• Heating Ventilation and Air Conditioning	232,000
• Plumbing	347,000
• Electrical	252,000
• Exterior Work	100,000
• Indirect Costs	215,000
• Contingencies	170,000
Total	$2,582,950

ADDITIONAL COSTS RELATED TO ENERGY CONSERVATION

Double glazing included in estimate	
3" Batts above suspended ceilings	$ 27,000
Total Additional Cost	$ 27,000

Cost Comparison

Cost per square foot excluding energy conservation (total area less community facilities)	$ 23.86
Cost per square foot including energy conservation	24.11
Cost per apartment unit excluding energy conservation (estimated)	14,579.00
Cost per apartment unit including energy conservation	14,649.00
Cost per bed excluding energy conservation (Total less apartment costs divided by 163 Beds)	13,004.00
Cost per bed including energy conservation	13,154.00
Average cost per square foot for new Homes for the Aged in Metropolitan Toronto excluding architectural fees	34.00
Average cost per bed in new Homes for the Aged in Metropolitan Toronto excluding architectural fees (500 SF gross per bed)	17,000.00

The Law and Finance

Legal and Financial Consultant - Mr. P. Quinn

Consideration was given to the legal implications and possible sources of financing for converting schools to create senior citizen apartments. It was assumed that Boards of Education will want to retain ownership of the land and grant leases for no more than 35 years. Beyond that period of time, school population trends cannot be forecast. A later reassessment of school needs might indicate, however, that the residential use of schools can be extended.

Legal Management

Ontario's Education Act provides that a school board may sell or lease surplus schools or school sites if approval is obtained from the Minister of Education and, in some cases, the Cabinet. However, no provision is made for a board to take a direct role in putting a school to a use other than its original purpose. Unless the legislation is changed, an independent person or body would have to undertake the conversion and management of schools used for housing.

Current policies of the Ontario Ministry of Education require that a board must first offer the property or building to other bodies including provincial government departments and municipalities or their various boards and departments. Only if none of these bodies wants the particular surplus site will the building then be available to others.

Responsibility for school conversion projects could be assumed by a municipal housing authority, a charitable organization, a co-operative formed by the residents themselves or by a private company.

A public housing body such as the Metropolitan Toronto Housing Co. Ltd. is the most likely candidate for the job. There are local housing authorities managing public housing in most areas of the province under the jurisdiction of the Ministry of Housing. They have authority to acquire and convert existing buildings for use as senior citizen housing.

Various charitable groups, including churches and related organizations, may be interested in the project. However, these groups usually limit themselves to providing start-up financial assistance.

Senior citizens have not shown an interest in non-profit housing co-operatives in the past but might with encouragement and support. In Ontario, the 1973 Co-Operative Corporations Act provides for such corporations to purchase and manage residential buildings.

Finally, private enterprise cannot be completely discounted. With provision for a suitable profit factor, there will undoubtedly be individuals or companies who will be interested in commencing these schoolhouse projects and carrying them forward to completion. It is expected, however, in light of the public nature of the property involved and the limited sources of financing available, profit-motivated individuals will normally not be the initiators of these projects.

Lease and Mortgage

Any authority that became project manager would not only pay rent, but would be responsible for all operating costs. Commonly, tenants in commercial buildings pay to alter, repair, maintain, clean, heat and insure the space they occupy. Their leases are referred to as being on a "net" basis.

Special provisions other than the usual covenants of a net lease will be required. These provisions might cover the use of adjacent school lands and those

common facilities, such as the auditorium, that may be opened for community use.

There would have to be insurance coverage to protect the Board of Education, and rules for the initial construction phase, possibly calling for the posting of a security deposit to cover liens against the property. Schools in Ontario are exempt from taxation but property taxes may be assessed against the lessee of a converted school.

Legal and financial aspects may influence the length of the term of leases. For example, in Ontario, the Planning Act prohibits any lease from having a term of more than 21 years, unless it is for the whole parcel of land owned by the lessor or it falls within certain exceptions. If part of a converted school or the grounds were to be maintained by the municipality for public use, a housing body desiring a 35-year lease would have to lease the entire site and arrange a sublease with the municipality. Alternatively, consent for a lease with a period exceeding 21 years may be obtained from a local committee of adjustment under the provision of the Planning Act.

The length of the term of the lease has serious implications for financing of any particular project. The school property cannot be used as security for a loan, only the leasehold interest of the lessee. Therefore, a lender that takes a mortgage will be concerned that the term of the lease is sufficiently long. If the lease were to expire at about the same time as the mortgage and, for some reason, a portion of the debt remained unpaid, then the mortgagee would be left with nothing to claim against. It will be necessary to arrange a mortgage with a term at least five years shorter than the term of the lease. Of course, the shorter the term of the mortgage, the higher the monthly payments will be, which could be a factor in determining the feasibility of the project.

Extensive legal work will be needed to undertake each school conversion project. In situations with a lease term as long as will be required, it is usual to have a complete search of title by solicitors. The quality of the lessor's title and his ability to assure quiet enjoyment to the lessee must be assured, certainly for the purpose of mortgage financing. The lease, or notice of it, and the mortgage will need to be registered. It may be necessary to incorporate and organize the management entity.

Zoning

Most school sites will be zoned locally for institutional or low density housing purposes. Thus, a use of the property such as the one contemplated by this study may not be permitted. It will be necessary in most instances to apply for amendments to the restricted area bylaw applicable to each site. In some cases, an amendment to the Official Plan may be required at the same time.

It appears likely that these requirements will not prove to be major problems. Senior citizen housing is not normally considered an offensive use and there is a general appreciation that there is an inadequate supply of this type of housing. Presumably neighbors will prefer senior citizen housing to vacant schools or other uses that would be more financially rewarding for a new owner. However, it should be remembered when setting the timetable for commencing any project that rezoning is a lengthy procedure, even without opposition.

Consideration should also be given to whether the appropriate residential zoning permits incidental commercial uses, such as a tuck shop, drug store or barbershop, within a project.

Financial Aspects

Central Mortgage and Housing Corporation (CMHC) appears to be the only reliable source of assistance for projects of the type contemplated by this study because it is unlikely that any private or institutional lenders would be interested unless significant guarantees or security could be provided. In part, the role that CMHC would play would include insuring the repayment of the loan to a private lender. Additionally, as will be seen, CMHC will also provide substantial assistance in meeting monthly payments required to obtain private mortgage financing.

New CMHC Non-Profit Housing Program, 1978

Since the commencement of this study, CMHC has introduced a new program to replace previous programs for these and other types of projects. Essentially, the concept of this new program is to provide subsidies to reduce the interest rate payable by the housing project to as low as 2 percent per annum on a loan covering 100 percent of the capital costs.

The borrower is expected to obtain financing on the private market for which CMHC will provide the appropriate guarantees and interest subsidies. In addition, CMHC will provide "start-up" grants to a maximum of $75,000 to assist in the planning of individual projects.

A copy of the pamphlet Non-Profit Housing Program 1978 – Explanatory Notes, produced by CMHC will explain in greater detail the type, extent and method of financing conversion projects. However, some comments need to be made about this new program.

Firstly, the program is obviously still in its formative stages and therefore uncertainty exists about how it will function.

Secondly, provision for annual review of the interest subsidy creates uncertainty for the planning of operating budgets of housing concerns enabled by this new program. If the subsidy is reduced in subsequent years, rents will have to rise accordingly to cover costs.

Finally, the fact that school property will be converted to a new use for the creation of housing should qualify projects for the same amount of financing as "New Construction".

Land Costs

In any housing project, the cost of land is a major part of the basic capital costs. Land rental costs in school conversion ventures can only be estimated at this time. The amount charged will ultimately be determined by the Ministry of Education. However, a preliminary indication has been given that there will be an annual charge equal to approximately 1 to 1.5 per cent of the appraised land value.

The rules of CMHC's Non-Profit Housing Program 1978 provide for land costs, but not those paid on an annual basis. For conversion projects to get federal assistance for the land cost, the Ministry of Education may have to revise its thinking. If the province required one initial rental payment, this could be considered a capital cost and benefit from the CMHC interest subsidy. The rental payment could not exceed the fair market value of the property.

Feasibility Test

Ultimately, the test employed by CMHC is that rental for a particular project must be significantly less, or in some cases, not more than the market rental for similar accommodation in the area.

Calculations were performed to determine the rental that could be charged for apartments at Rexdale Junior School and Martin Grove Gardens Junior School. No estimates were prepared for Royal York Collegiate Institute as the concept involves dependent-care facilities. The costs attributable to dependent-care facilities cannot be financed through CMHC as they fall under provincial jurisdiction. However, for comparison purposes, it should be noted that the total estimated price for alterations is $2,582,950, while it has been estimated this building would cost about $6,000,000 to replace at today's prices.

All calculations are based upon capital cost figures of Helyar and Associates Ltd. as contained in the Cost Analysis section of this report. An estimate has been inserted for land cost. Some investigation has been done respecting rents available in the local area. Finally, the interest cost subsidy has been assumed at its maximum for a project financed to the extent of 100 per cent of capital costs.

Rexdale Junior School

1. **Estimated Annual Operating Costs**

Land Cost	$ 10,000
Taxes	25,000
Insurance	2,000
Heat	8,000
Hydro	7,000
Water	2,500
Maintenance	5,000
Superintendent	7,000
Administration	8,000
Reserve	3,000
Contingency	8,000
Total	$ 86,000

Land cost is based on 1.5 per cent of an assumed market value of $200,000 per acre for a total of 3.5 acres required for housing project.

For 49 units, equals approximately $146.00 per unit monthly.

2. **Capital Costs**

Construction	$ 724,150
Development and fees	127,000
Energy conservation	37,700
Total of above	$ 888,850
Appliances	22,540
Laundry equipment	920
Furnishings – public areas	6,000
Capital Costs (excludes financing costs)	$ 918,310

For 49 units, equals approximately $19,000 per unit.

3. **Financing Costs**

a) The monthly cost of principal and interest would be $176.39 per unit assuming an average capital cost of $19,000 per unit financed by a mortgage for the full amount, amortized over the normal period of 25 years at 10.5 per cent.

b) The initial cost of subsidized financing would be $80.46 per unit per month, based on a 25-year amortization of the financing. This calculation assumes use by a public housing authority of the full subsidies available under the new programs announced May 5, 1978 by the Minister of State for Urban Affairs under Sections 15 and 56.1 of the National Housing Act. These programs allow for a federal subsidy that initially "writes down" the mortgage payment to an equivalent of a 2 per cent interest rate, dependent on the relationship of residents' income to rent.

4. **Rent Geared to Income**

The new rent-geared-to-income program of the federal government contains no restrictions governing the income of residents in subsidized projects. However, a certain portion of the residents must be of low income. It is expected that the percentage of low income residents in housing for senior citizens will be relatively high, perhaps as high as 70 percent. These low income residents will be required to pay a portion of their income towards rent, the amount to be determined by a sliding scale ranging from 18 to 25 per cent of gross income. The remainder of the rent will be supplied through a provincially administered program.

The whole program is subject to policies and requirements that have yet to be issued. Provincial programs, through which the federal program will be implemented, will also have to be amended.

The rental that will be charged for each unit will be determined so as to recover all costs, in the manner outlined above.

5. **Market Rents**

For comparison purposes, it was found that market rents in the Rexdale area are as follows:

Bachelor	$230 monthly
One Bedroom	$250 monthly

6. **Subsidized Rents**

Based on the assumptions explained earlier, the average rent per unit that could be charged at Rexdale Junior School would be as follows:

Average Operating Cost	$ 146.00
Average Financing Cost (after allowing for maximum subsidy)	80.46
Total	$ 226.46

Martin Grove Gardens Junior School

1. **Estimated Annual Operatings Costs**

Land cost	$ 10,000
Taxes	21,500
Insurance	1,750
Heat	7,400
Hydro	6,000
Water	1,700
Maintenance	4,400
Superintendent	7,000
Administration	8,000
Reserve	2,500
Contingency	6,500
Total	$ 76,500

Land cost is based on same assumptions as for Rexdale Junior School.

For 39 units, equals approximately $163.00 per unit monthly.

2. **Capital costs**

Construction	$ 647,200
Development and fees	105,092
Energy conservation	37,800
Total of above	$ 790,092
Appliances	17,940
Laundry equipment	920
Furnishings – public areas	6,000
Capital Costs (excludes financing cost)	$ 814,952

For 39 units, equals approximately $20,900 per unit.

3. **Financing Costs**

Using the same assumptions as described above for Rexdale Junior School, the monthly financing cost of the average capital cost of $20,900 per unit would be $194.03. On the basis of the maximum CMHC interest subsidy, the monthly financing cost attributable to each unit should approximate $88.51.

4. **Market Rents**

On the basis of Rexdale market rents, it is assumed that market rents are as follows:

Bachelor	$230 monthly
One Bedroom	$250 monthly

5. **Subsidized Rents**

Based on the assumptions explained earlier, the average rent per unit that could be charged at Martin Grove Gardens Junior School would be as follows:

Average Operating Cost	$ 163.00
Average Financing Cost (after allowing for maximum subsidy)	88.51
Total	$ 251.51

A Final Word

After weighing all the facts and figures produced from this study, the study group has concluded that conversion of schools to senior citizen housing is highly feasible, socially acceptable and economically sound. It is a possibility that will likely have to be definitely considered by many boards of education and many Ontario and Canadian municipalities within the next 10 or 15 years as enrolment reductions continue and many schools are closed.

Such housing would be welcomed by elderly people. Both the participants in this study and an evaluation panel of senior citizens agreed that the living environment that could be provided in school buildings, within the financial structure detailed in this report, would not only equal but be superior to most senior citizen housing now available.

Renovations needed to create a residential atmosphere were found in the three case studies to be less costly than new construction, with the prospect of an overall saving for a community interested in providing senior citizen housing. In addition, there is the possibility of considerable future saving. In the event that surplus school sites are once again needed for educational purposes, the land would have been maintained in public ownership and would be available for future use without prohibitive cost.

A public body such as a municipal housing authority is the most likely candidate for undertaking school conversion projects, but private enterprise or co-operatives should not be ruled out.

For school conversion projects to go ahead, certain governmental assistance will, of course, be required. It has been found that a new non-profit housing program announced by Central Mortgage and Housing Corporation could be of assistance. The program, which will require amendments to provincial programs to be implemented, reduces the cost of borrowing money for renovations. To maximize the federal assistance available through the program, the province could request that rent for land be paid in one initial payment rather than in periodic payments throughout the term of a long-term lease. The initial payment would then be considered a capital cost.

It is also suggested that the province establish a consistent policy for recovering its contribution to the original cost of building schools. The policy has been to deduct from a school board's regular grants the equivalent of the undepreciated value of the building. Whether or not a long-term lease or sale of property to a non-profit organization is approved by the Ministry of Education, it is suggested that revenue be used by boards of education to retire any existing capital debt on the facility. The balance of the revenues would be placed in a reserve fund for future capital expenditures. The Ministry would cease to pay its share of any outstanding debt once a lease is signed or the property is sold. For grant purposes, revenues from the leasing or sale of school property should be reported separately from revenues accruing from rental or sales of other school property.

This report is, of course, not the ultimate answer on either feasibility, acceptability or actual costs on school conversion for housing for the elderly. We have attempted to arrive at conclusions by synthesizing data derived from detailed studies of three actual schools. However, costs and conditions may change with a few months of delay, or even after blueprints have been drawn and work is underway. Actual proof of the conclusions drawn by this study will be established only by the completion and occupation of a senior citizen housing complex in an actual surplus school. When and where this takes place will be determined by many factors beyond the scope of this study.